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INSTITUTE OF SOCIAL AND ECONOMIC RESEARCH
UNIVERSITY COLLEGE OF THE WEST INDIES, JAMAICA, W.I.

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Education and Economic Development[1]

By

W. Arthur Lewis.

Poor countries cannot afford to pay for as much education as richer countries. They have therefore to establish priorities in terms both of quantity and of quality.

The requirements of economic development help in setting priorities, but they are not over-riding. Education was not invented in order to enable men to produce more goods and services. The purpose of education is to enable men to understand better the world in which they live, so that they may more fully express their potential capacities, whether spiritual, intellectual or material. Indeed, through the centuries the traditional attitude of "practical" men towards education has been that it unfits its recipients for useful work. Certainly, most people would agree that education is desirable even if it contributed nothing to material output.

From the standpoint of economic development, one may distinguish between types of education which increase productive capacity and types which do not. Teaching an African cook to read may increase his enjoyment of life, but will not necessarily make him a better cook. Education of the former kind I have called investment education, while the latter kind is called consumption education. From the standpoint of economic development, investment education has a high priority, but consumption education is on a par with other forms of consumption. The money spent on teaching cooks to read might equally be spent on giving them pure water supplies, or radios, or better housing, and must therefore compete in the context of all other possible uses of resources. In this perspective the needs of economic development help to determine the minimum amount which must be spent on education. How much to spend above this minimum depends on how rich the society is, and on competing claims. This article is confined to seeking to discover the nature and limits of investment education.

II. Absorptive Capacity

It is fundamental to this approach that the amount of education which "pays for itself" in a poor country is limited. Some confusion has been caused by applying to these countries the conclusions of statisticians who try to measure the yield of education in rich countries, and who emerge with

[1]This is a substantially revised and extended version of a paper presented to the UNESCO conference on the Educational Needs of Africa held at Addis Ababa from May 15th to 25th, 1961.

such conclusions as that the yield of investment in humans exceeds the yield of investment in physical resources. In the first place, investment in humans is not to be equated with education, as normally conceived in institutional terms. Human capacity is improved by education, public health, research, invention, institutional change, and better organization of human affairs, whether in business or in private or public life. To attribute all improvements in productivity to education would therefore be more than a little naïve. Secondly rich countries have a greater capacity to absorb the products of schools than have poor countries; so even if we could isolate the average yield of various types of education in rich countries, this would throw no light on the marginal yield of similar types in poor (or for that matter in rich) countries.

An over-supply of educated persons is a familiar feature in poor countries, e.g., the over-supply of university graduates in India in the 1930's, or the over-supply of primary school graduates in some West African countries today. An education system may very easily produce more educated people than the economic system can currently absorb in the types of job or at the rates of pay which the educated expect. This is a short-period phenomenon. In the long run the educated learn to expect different jobs and to accept lower rates of pay. But the long run may be very long, and the jobs accepted may gain very little from the education received.

Part of the difficulty of absorption is due to the education system producing the wrong kinds of education. The balance between primary, secondary and higher education; between general and vocational studies; between humanities and sciences; or between institutional and in-service training – all these need to be blended in the right proportions if education is to be a help rather than a hindrance to economic development. Because the pattern of education was formed many centuries before the modern technological revolution occurred, most education systems give too little weight to the natural sciences and technology, whether at primary, secondary or higher levels, so that a surfeit of persons trained in literary studies, side by side with an acute shortage of persons trained in scientific, biological or mechanical arts, is a feature of several countries. Careful survey and planning are needed if the education system is to produce the balance of skills which the community exactly needs at its particular stage of development.

Nevertheless, the problem is not wholly or even mainly one of balance. The main limitation on the absorption of the educated in poor countries is their high price, relatively to average national output per head. In a country where most people are illiterate, the primary school graduate, whose only skills are reading and writing, commands a wage much higher than a farmer's income. A university graduate who, in a rich country, commences at a salary about equal to a miner's wage, may in a poor country, receive five times a miner's wage. In consequence all production or provision of services which depends on using educated people is much more expensive, in relation to

national income, in poor than in rich countries. The poor countries may need the educated more than the rich, but they can even less afford to pay for or absorb large numbers.

In the long run the situation adjusts itself because the premium for education diminishes as the number of educated increases. Either the educated have to accept less, or else they are unable to resist the pressures which cause the wages of the less educated to rise faster than their own. The grumbling of the middle and lower middle classes as their privileges diminish is a universal phenomenon, and not infrequently has political consequences. Upper classes based on land or capital have always favoured restricting the supply of education to absorptive capacity, because they know the political dangers of having a surplus of educated persons.

The situation is particularly acute in Africa, where senior administrative salaries have had a considerable premium above similar salaries in Europe, in order to attract European recruits. In consequence, the range of personal incomes is wider than anywhere else in the world; much wider than in Asia, where senior salaries are only about a half of their European equivalents. Now that Africans are taking over the top administrative jobs, they are asking, in the name of the sacred principle of non-discrimination, to be paid the same salaries as Europeans, as it it were necessary to spend 50 per cent more on them to attract them away from positions in Europe. Many African politicians have stamped on this ridiculous proposition, which handicaps development by making it unnecessarily expensive, and also merely substitutes the yoke of the African B.A. upon the neck of the African peasant. The ultimate outcome cannot be in doubt, but much passion will be expended on the way.

As the premium for education falls, the market for the educated may widen enormously. Jobs which were previously done by people with less education are now done by people with more education. The educated lower their sights, and employers raise their requirements. Primary school teaching illustrates this admirably. In the poorest countries, the requirement is completion of a primary school education. At the next level, it is completion of a secondary education. In most American states it is now completion of a college education; and in one or two American cities one cannot become a primary school teacher without an M.A. degree. Similarly, ten years ago people wondered what the United States would do with its flood of college graduates; but as the premium on college graduates has diminished, business men have decided to hire increasing numbers even for jobs requiring no special skill.

As a result of this process an economy can ultimately absorb any number of educated people. It follows that it is erroneous, when making a survey of the need for skilled manpower, to confine one's calculations to the numbers that could be absorbed at current prices. One ought to produce more educated people than can be absorbed at current prices, because the alteration in current prices which this forces is a necessary part of the process of economic development. On the other hand, this adjustment is painful, and

fraught with political dangers. Like all social processes, it requires time for relative smoothness.

III. Primary Education

To give eight years of primary education to every child would cost at current prices about 0.8 per cent of national income in the U.S.A., 1.7 per cent in Jamaica, 2.8 per cent in Ghana and 4.0 per cent in Nigeria. The main reason for this wide difference is that, while the average salary of a primary school teacher is less than 1½ times *per capita* national income in the U.S.A., a primary school teacher gets three times the *per capita* national income in Jamaica, five times in Ghana, and seven times in Nigeria. If the cost of education is to be kept within taxable capacity, widespread provision of education belongs to a stage of development where the premium for education has already diminished to reasonable proportions.

Apart from its cost, universal primary education, if attained with speed, raises problems of absorption. In a community where only 20 per cent of children enter primary school, and only 10 per cent finish the course, the demand for primary school graduates is such that they command considerable salaries in white collar jobs. If the number entering primary school is pushed up from 20 to 80 per cent of the age group within ten years, as has happened in some West African countries, the result is frustration. The children pouring out of the primary schools look to the town for clerical jobs, and are disappointed when they do not find employment. The towns fill up with discontented youths, faster than houses, jobs, water supplies, or other amenities can be provided, and urban slums and delinquents multiply while the countryside is starved of young talent.

The situation is sometimes blamed on the failure of rural schools to adapt their curricula in such a way as to orientate rural children to rural life. This, however, is only part of the problem. The primary school leaver's expectations derive not from the curriculum but from the status which his immediate predecessors have enjoyed. In a developed economy the wage of an unskilled labourer (which is all that primary education produces) is about one-third of the average income per occupied person; but a primary school leaver in Africa expects about twice the average income per occupied person. Obviously, if literacy became universal it would be impossible to pay every literate person twice the average income. If the primary school leaver is to get twice the average income, he can fit only into those parts of the economy which yield twice the average income, and the rate of absorption of primary school leavers then depends on the rate at which these modernised sectors of the economy are expanding. He will fit into a revolutionised agriculture, with modern practices and equipment, but it is useless to expect him to fit into the three-acres-and-a-hoe farming of his father. Any good primary school will widen a child's horizons, and create expectations which primitive farm-

ing cannot fulfil. So even if rural schools concentrate on rural life, their products are bound to suffer frustration unless the whole social fabric of agriculture is being modernised at the same time.

Cutting the cost of education by reducing the length of the primary course makes absorption still more difficult. Several African countries have now adopted a six-year primary course. This means that hordes of youngsters are turned on to the labour market, aged 12, with high expectations and low skills. In part this is a borrowing from British or French or American systems, where universal six-year primary education is followed by universal schooling of some secondary type for at least a further three years. In the absence of this secondary stage, African countries would do better, from the standpoint of absorption into the economy, if they gave primary education to fewer children for a longer period, of say eight or nine years.

The limited absorptive capacity of most West African economies today – especially the backwardness of agriculture – makes frustration and dislocation inevitable if more than fifty per cent of children enter school. This, coupled with the high cost due to the high ratio of teachers' salaries to average national income, and with the time it takes to train large numbers of teachers properly, has taught some African countries to proceed with caution – to set the goal of universal schooling twenty years ahead or more, rather than the ten years ahead or less which was associated with the first flush of independence movements. This decision is highly controversial to those for whom literacy is a universal human right irrespective of cost, to those who feel that it is better to be taught by untrained teachers than not to be taught at all, and also to those who see in the frustrations generated by incapacity of the current social fabric to absorb, the very stuff which will promote needed change rapidly. On the other hand, considering that in most African territories less than 25 per cent of children aged 6 to 14 are in school, a goal of 50 per cent within ten years may be held to constitute revolutionary progress.

IV. Secondary Education

If the poorer countries tend to expand primary education too rapidly, their failure to make adequate provision for secondary education is a major handicap to economic development.

The products of secondary schools are the officers and non-commissioned officers of an economic and social system. A small percentage goes on to university education, but the numbers required from the university are so small that the average country of up to five million inhabitants could manage tolerably well without a university of its own. Absence of secondary schools, however, is an enormous handicap. These schools supply the persons who with one or two more years of training (in institutions or on the job) become technologists, secretaries, nurses, school teachers, bookkeepers, clerks,

civil servants, agricultural assistants and supervisory workers of various kinds. The middle and upper ranks of business consist almost entirely of secondary school products, and these products are also the backbone of public administration. To have to import large numbers of people at this level, paying them in salaries and allowances two to three times what they could get in rich countries, is a blow to most development schemes. In industry it makes production costs absurdly high. In public administration it puts many desirable schemes – such as agricultural extension or nursing services – beyond the range of taxable capacity. While, as for democratic social life, the absence of a good sprinkling of educated people, serving voluntarily in public agencies (local government, cooperative societies, etc.) and acting as an informed public opinion, exposes society too easily to deception and corruption. When one compares the countries which have become independent since the second World War, there is a clear difference between those whose business and public affairs are still run mainly by expatriates, under Ministers of the country, and those which are really competent to run their affairs at all levels, because their secondary schools have supplied streams of people for intermediate and higher posts in business and administration.

The proportion of the population needed in secondary schools is a function of the level of development. If we include nurses, secretaries and school teachers, the proportion of the adult population holding jobs for which a secondary grammar school education is now normally considered an appropriate preliminary is about 5 per cent in Jamaica. This is higher than the proportion who have actually completed secondary education. It is the number of jobs for which a secondary education would now be expected. In African countries the current proportion is very much smaller, because the subsistence sector is so much greater. The number who have received secondary education is only a fraction of one per cent, while the number holding jobs for which a secondary education is considered appropriate is probably between 1 and 2 per cent.

One can calculate the percentage of the age cohort who should receive secondary education from the formula

$$x = \frac{n\,(a + b + c)}{m}$$

where

x = proportion of age cohort to be recruited;
n = ratio of number of secondary-type jobs to adult population;
m = ratio of number in age cohort to adult population;
a = normal percentage wastage of nationals of the country;
b = abnormal wastage due to replacement of expatriates;
c = percentage rate of growth of the number of secondary type jobs.

Of these c is the most difficult factor to assess. In a community such as the United States, which is already nearly saturated with secondary school types, the rate of growth of numbers cannot much exceed the rate of

growth of population. In a community like Jamaica, where the modernised sector of the economy employs only about a half of the population, and is still making inroads into the numbers engaged in subsistence farming, petty trading and domestic service, secondary school type jobs probably grow slightly faster than the normal rate of growth of national income, since they depend mainly on the growth of the public sector, and of other service industries. The current growth rate in Jamaica is probably about 6 per cent per annum. In West Africa, where the modernised sector is still smaller, its expansion relatively to the whole economy is still faster (especially as public services are growing rapidly) and secondary school type jobs may be growing by as much as 8 per cent per annum. In this area too, the proportion of expatriates in secondary type jobs is abnormally high, and a large wastage figure may be expected; say 15 per cent of that proportion in each year. One may thus guess that the percentage of the age cohort required in secondary grammar schools is

$$\text{In Jamaica } x = \frac{0.05(0.02 + 0 + 0.06)}{0.04}$$

$$= 10.0 \text{ per cent}$$

$$\text{In Nigeria}^2 \; x = \frac{0.01(0.025 + 0.005 + 0.08)}{0.045}$$

$$= 2.4 \text{ per cent}$$

These ratios are just about consistent with the demand for secondary education on the part of parents. In most of the poorer countries at present, parents of about 8 to 12 per cent of the children who start primary education want these children to go on to secondary education of the grammar school type; and where government schools are not provided, many private schools of very poor quality, charging low fees, spring into existence to meet the demand. If good grammar schools are provided for 10 per cent of children entering primary school, this will just about meet both parental demand and also absorptive capacity.

The obstacle to providing secondary education in West Africa is not so much recurrent cost as capital cost. Recurrent cost is abnormal, for reasons already given. Cost per teacher is 30 times *per capita* national income in Nigeria, compared with 12 times in Jamaica, and with only twice in the United States. Nevertheless, even in Nigeria to provide grammar school education for 5 per cent of the age group costs a little less than 1 per cent of national income. The fantastic burden is the cost of building schools. One can build a good secondary school in England for £50,000, but the cost of a school for a similar number in Ghana may be £250,000. This is because many West Africans have persuaded themselves that only boarding schools are appropriate to Africa. The argument runs as follows. "To get a fully specialised staff, a school must have 20 teachers. Therefore it must have 500

[2]This is an average for the whole country. The situation differs widely in the three regions.

students. Therefore, assuming 5 per cent schooling, it must draw from a population of 70,000. Since very few African towns have a population exceeding 10,000, it follows that most African towns cannot support a day secondary school. Therefore the solution has to be boarding schools." A boarding school, complete with dormitories and staff houses costs £250,000. The argument can be attacked at either end. Must a secondary school have 20 teachers? If, instead, it started with only six teachers, one could build a series of day schools in 3 times as many small towns. Even when the school has to be large, the British solution is boarding, but the American solution is the school bus, which is hardly known in Africa. Some financial sense is badly needed in planning secondary schools in Africa. It is obviously absurd to take the line that Africa's way to secondary education must be through building Etons for the majority of African children.

Grammar schools are not by any means the only, or in numbers even the chief form of secondary education. If one follows some authorities in reserving the term "primary" for education up to age 12, and in using the term "secondary" for all education between 12 and 18, then some secondary education should be provided for all children who complete primary education, since such children are not ready for the labour market at 12. Children who do not go on to grammar school pass into secondary schools with a practical bias, known as "middle" or "intermediate" or "central" or "modern secondary" schools, or into the practical streams of "comprehensive schools", or, in the French system into the "first cycle" of secondary schooling. Except in the United States of America, the great majority of children end their schooling here.

A few of these children are ready, at about age 15, to pass into vocational schools, for full-time technical training. It is hard to judge how large this group should be. People possessing the skills taught in such schools — building, metal working, engineering — comprise from 2 to 8 per cent of the working population in less developed countries, but it does not follow that 8 per cent of children should enter such schools. The traditional training for these trades is a system of apprenticeship. In the United States of America, where nearly 70 per cent of children are kept in school until age 17, vocational schooling has had to substitute for on the job training up to that age. Elsewhere, it is probably cheaper and more effective to rely on apprenticeship; to put not more than 2 per cent of the age cohort through full-time courses, and to arrange part-time courses for the rest.

Actually, in poor countries half the age cohort should enter agriculture. Primary and intermediate schools in rural areas have an agricultural bias, but they see the child through at most to age 15. Governments provide farm schools to train agricultural assistants for government service, but very few provide courses for students who wish to farm. Probably the ideal is for the child to start farming at 15, and then around age 18 to go to a practical farm school for about six months to see modern techniques. It is true that agri-

cultural extension can be done on farms by peripatetic agricultural assistants, but this is not an adequate substitute for an intensive course for bright young farmers, any more than "training-within-industry" is a complete substitute for vocational schools.

When the grammar school children leave school, between 16 and 18, they are ready for specialised training. The great majority will go straight into employment, and receive on the job training as clerks or technical assistants. Others need preliminary training of say from six months upwards, to become secretaries, medical technicians, nurses, agricultural assistants, primary school teachers, junior engineers, or as the case may be.

Very few of the poorer countries make adequate provision for this specialised but sub-professional training. This is because the supply of educational facilities is not properly planned in relation to the needs of economic and social development. The making of "manpower surveys" is spreading as a remedy for this defect. The technique of making such surveys is still rudimentary. Asking employers how many people they intend to employ, or would like to employ in various categories, yields interesting answers, but these answers do not necessarily add up to absorptive capacity. It should be possible, from examining the manpower statistics of different countries in different stages of development, to produce some coefficients which would act as a check on the results yielded by questionnaires, but basic work of this kind is only just starting in the universities. Meanwhile it is clear that even rudimentary manpower surveys help governments to appreciate the need for specialised training facilities for people between ages 16 and 20, so greater use of such surveys is certainly to be commended.

V. Adult Education

The quickest way to increase productivity in the less developed countries is to train the adults who are already on the job. Education for children is fine, but its potential contribution to output over ten years is small compared with the potential contribution of efforts devoted to improving adult skills.

This field is almost wholly neglected. In the government hierarchy it belongs not to the Ministry of Education but to the Ministries of Trade, Agriculture, Mining, Health, Communications, Community Development and others. Most of these Ministries are too busy making new regulations and processing forms, to regard adult education as a major part of their functions.

Yet there is ample testimony to what adult education can achieve, whether in the form of training-within-industry, evening classes, or sandwich courses in urban centres; or in the form of agricultural extension, health programmes, or community development in rural areas.

Experience shows that the secret of success is to make adult education

into a popular mass movement. There is not much point in offering adult classes if adults do not wish to attend classes. The Danish folk movement, or the Russian literacy campaigns or any other adult education movement has been successful in so far as it has stirred the imaginations of the people, and created a mass desire to learn. Some popular African leaders, like M. Sekov-Toure of Guinea, understand this very well, and are therefore likely to succeed in getting adult education, in one form or another, to contribute substantially to economic and social development. Elsewhere, adult education languishes as much for want of understanding as it does for lack of funds.

VI. University Education

The number of university graduates who can be absorbed at low levels of economic development is relatively small. The proportion of jobs in Jamaica for which a university education is now considered normal corresponds only to about 5 per thousand of adult population; and the corresponding figure for Nigeria, according to Professor Harbison's count[3] is only around 1 per thousand of adult population. We can apply to these figures the same formula and the same rates of growth as for secondary education (leaving out the coefficient for expatriate wastage, since the number of expatriate graduates does not decline with independence; there are fewer pensionable civil servants, but more expatriates on contract). We may thus guess that the proportion of the age cohort who should graduate from the university is

$$\text{In Jamaica } x = \frac{0.005(0.022 + 0.06)}{0.035}$$

$$= 1.17 \text{ per cent}$$

$$\text{In Nigeria } x = \frac{0.001(0.028 + 0.08)}{0.04}$$

$$= 0.27 \text{ per cent}$$

The answer we get for Nigeria corresponds to about 2,200 students leaving the university each year, and is not far from Professor Harbison's. The answer for Jamaica, if generalised for the area served by the University College of the West Indies, gives an output of 900 students a year, or a total undergraduate body, allowing for wastage, of about 3,300 students, compared with the current total of 980 students at U.C.W.I.[4] The postulated increase

[3] Cf. Ashby Report, *Investment in Education*, Lagos, 1960.

[4] The total number of West Indians in universities is about 4,000, of whom 3,000 are in British, American or Canadian universities. Allowing for the longer degree courses in North America, and for the fact that a very large proportion of the students in North America are part-time students, the annual output of West Indians from universities is now probably about 900. The current shortage of graduates is due to the fact that a large proportion of those who qualify in North America do not return to the West Indies; there is also considerable imbalance as between faculties. The West Indian university problem is not to have more students enter university (apart from the postulated increase of 6 per cent per annum) but to provide more university facilities in the West Indies, both to fill the gap of the students who do not return, and also because U.C.W.I. has more to offer to West Indians than they can get in foreign universities, in terms of suitable curricula as well as of emotional balance.

of 6 per cent per annum would bring this figure up to 5,500 students by 1970.

Most of the new African countries do not at present have enough students to justify building a university; it is cheaper for them to send their students abroad. In a country with a population of 2,000,000, putting say 0.5 per cent of the age cohort into university, the total student number comes only to 700. This is quite uneconomic for a university with the broad range of faculties which is usually sought. A liberal arts school of the American type is economic with 500 students, but to be economic a British type combination of Faculties of Arts, Science and Social Science needs about 1,200 students; Medicine needs 300 students, and Agriculture and Engineering need 200 each. This makes about 2,000 students in round figures. All the universities founded in Africa since the war have been costing from 3 to 5 times as much per student as it costs to run a university in Europe.

In so far as these exorbitant costs are due to abnormally high staff/student ratios, ranging upwards to 1 to 3, as against 1 to 8 in Britain, or 1 to 20 in liberal arts colleges, they are temporary, and will pass as student numbers expand. But this is by no means the only cause. In British universities the cost of the average university is about £4,000 a year per teacher. In universities in British tropical Africa the cost per teacher exceeds £6,500 a year. This is mainly because the teachers, two- thirds of whom are recruited in Britain, have to be paid higher salaries and given greater allowances than they get in Britain, and cost the African universities, including passages, at least £1,500 a year more than they would cost in Britain. Even the African teachers are paid about £1,000 a year more than African civil servants of equivalent education. On top of this, these universities are not sited in towns, where they could use public facilities (and contribute the maximum amount to public life) but have in every case been sited away from towns, where they have to maintain their own police, telephone exchanges, electric power stations, sewerage disposal, transport and other services, and have therefore to carry a service organisation about five times as large as is carried by an urban university. For the same reason the capital cost, in terms of student hostels and houses for the teaching staff is simply fantastic, especially having regard to the extravagant housing standards which have been traditional for Europeans in the British tropics. As it happens, the capital cost of African universities seems likely to be met mostly by grants from the treasuries of Britain, France and the United States, but the recurrent cost is an immense burden, except to the extent that it is met by France in the former French territories. (Costs in the West Indies are similarly extremely high). The situation is very different in India, or in Egypt, where university lecturers are recruited locally, and cost no more than other nationals of equivalent education. Just as African educators want to build Etons for every secondary school child, so also they have loaded on to the backs of their taxpayers, who are among the poorest in the world, the most expensive universities in the world outside North America.

However, even if the cost per student were no higher in Africa than in Britain, the cost to Africa of training a student in Africa would still exceed the cost to Africa of sending him to Britain. This is because an African student in Britain pays only a small fraction of the cost of his training; the rest is met by the British taxpayer's grant to the universities. So long as tuition fees in Europe are negligible, it will always cost an African economy more to train students at home than it would cost to send them to similar universities in Europe. (One can send a student for £600 a year, whereas even with utmost economy the tuition and maintenance cost at a British-type African university will not fall below £1,000 a year.) It is not possible for a large country to place all its students overseas, but this is feasible for a small country, especially while the percentage of students for university training is still small. From the economic point of view, therefore, one must ask: why should a small African country (or the West Indies) have its own university, when two or three or four times as many students could be sent abroad for the same money?

The chief reason why it is worthwhile, from the economic point of view, to have a university at home, even though it costs more than sending students abroad, is that the function of a university is not confined to teaching students. If it were merely a question of teaching, there could be no doubt about the answer. For though one can argue on either side in terms of the atmosphere of a home university, or the suitability of its curricula, or the advantages of foreign travel, the net result of such argument fades into insignificance besides the possibility of sending 5 students abroad for every 3 who might be trained at home (assuming the most economical set-up). Only if foreign aid provides all the capital and a third of the running expenditure can a purely teaching university justify itself on economic grounds.

Apart from teaching, a university contributes to its community through the participation of its teachers in the life of the country, and through its research into local problems.

A poor country has very few educated people. To have in its midst a body of one or two hundred first class intellects can make an enormous difference to the quality of its cultural, social, political and business life. This, however, depends on participation. If the university is built in the bush, and isolates itself as a self-contained community, it misses a tremendous opportunity of service. Countries rich in income and talent can afford to bury their universities in the countryside. But the universities of poor countries should be in the heart of urban centres, where they can do most good. (This also incidentally greatly reduces the cost of lodgings and of services). The opportunities for participation are immense; membership of public boards and committees; contributions to professional societies; guidance of teacher training colleges; availability for consultation by administrators and business people; membership of musical, dramatic, artistic and other groups; journalism and radio work; adult education classes. If the staff of the university

is not giving active leadership in all these fields, it would be cheaper to close the place down, unless it is also doing excellent research.

A country needs to have some research institutions whether it has a university or not. If the same people do teaching and research, only a part of the university cost should be charged against teaching. The question therefore arises whether teaching and research should be combined.

The British theory that every university must regard itself as primarily a research institute with students, doubles the cost per student. A research institute type of university has a staff student ratio of 1 to 10 (excluding medicine) with a maximum teaching load of ten hours a week; whereas a university where the staff are not expected to do research can have a staff student ratio of 1 to 20, with a teaching load of 20 hours a week. Any university which adopts the British ratios must insist that any staff member who does not make significant research contributions must be fired. For a poor country in Africa or elsewhere to load itself up with the expense of a British type university, and accept from its teachers that they should be judged primarily by teaching results, would be folly of a high order.

One can argue persuasively that the first university in any poor country should be of the research institute type, provided that the research test is rigidly applied to its staff. However, as student numbers expand, it becomes progressively harder to justify the multiplication of these expensive structures in poor countries. The great majority of students entering a university are not research types, and do not need to be carried to the frontiers of knowledge. What they need is a broad education, to fit them for administration, commerce, or teaching up to fifth form level. For this, the American conception of a liberal arts degree (which combines science, humanities and social studies) is much more relevant than the British Honours degree. There should be at least one university engaging in high quality research, and offering high quality Honours degrees, on the basis of high entrance standards. But, as numbers expand, the majority should be diverted into liberal arts colleges.

Here the teacher student ratio can be halved, and (since one does not need top flight researchers) teacher salaries can be more in line with salaries in the public services[5]; if in addition most of the students live at home, one can get the cost of a student down to perhaps two-thirds of what it would cost to send students abroad. To mitigate the prejudice which exists in British circles against such conceptions, one must add that, as in the United States, any graduate of one of these liberal arts colleges who diplayed special talents, could go on to the major university for post-graduate training.

Similar principles could be applied to professional training, but with less justification. In every profession there are at least three layers; top flight researchers, professionals and sub-professionals. In agriculture, there are spe-

[5]The British practice of paying all university teachers according to a single scale would not be appropriate to a country which has different kinds of universities.

cialists, general agronomists, and agricultural assistants trained in farm schools. Medicine has specialists, general practitioners, and a third layer of nurses, dispensing chemists and medical technologists. Engineering has its scientists, its professional engineers, and its third layer of technologists.

The proportions in which these layers are combined are different in rich and poor countries. The rich countries can afford to spend much more proportionately on research than the poor countries, so the need for top-flight scientists and specialists is proportionately greater. Such men also need long periods of stimulation working in first class laboratories abroad, so the universities of poor countries should not try to put too much of their resources into superior training of first class men. The bulk of their work must be the training of the second layer.

The ratio of numbers in the second to numbers in the third layer is also smaller than in rich countries. Because of the high cost of engineers, doctors and agronomists, one employs fewer of these and more technologists, nurses and agricultural assistants, who therefore carry greater responsibilities. This is reflected in the ratio of jobs for which a degree is currently considered necessary to jobs for which a grammar school education is considered appropriate, which is more like 1 to 10 in poor countries, compared with 1 to 5 in Europe.

Because of the high cost of training graduates, it is sometimes suggested that the universities in poor countries should lower the standards of professional training, on the ground that it is better to have say 100 three-quarter trained doctors, who can be spread over the countryside, rather than 70 well trained doctors, leaving 30 per cent of the population without a doctor. This has been done in some places. The alternative policy is to mass produce not the second layer, but the third, and in the process even to upgrade the training of the third layer. One then floods the countryside not with low-grade dentists, but with high grade dental assistants; not with poorly trained agronomists, but with well trained agricultural assistants. If this policy is adopted, the corollary is to up-grade the training not only of the third layer, but also of the second layer. For the second layer professional now has many more third layer people working under him; he resigns to them more of the routine work, and concentrates to a greater extent on the more difficult tasks. His administrative responsibilities are also greater. From this it follows that he needs an even sounder training than his professional colleague in Europe. It is indeed quite arguable that, what with language difficulties, greater administrative responsibilities, and the need to work in isolation from specialist advice and laboratory analysis, professionals need at least one more year of training in poor countries than in rich countries.

I have written at some length on university education because the economic aspects of this subject are very different in poor countries from what they are in rich countries, and are nevertheless so seldom considered. It tends to be assumed that what is right in Britain must also be right in Nyasaland.

Even in Britain, university people are not good at seeing themselves in their social context; most of the best of them are too busy teaching and doing research, to worry about such an abstraction as the social and economic context of a university, and when such people arrive in the tropics, it is easier for them to continue old patterns than to invent new ones. The subject is fraught with difficulty, and merits widespread informed discussion.

Some National Income Aggregates for Jamaica At Constant Prices

By

Jeanette Bethel

In this paper an attempt has been made to achieve three objectives:

(1) to provide a brief background to the methods involved and the uses to which constant prices estimates can be put in national accounting;

(2) to discuss in some detail the sources and methods used in arriving at the constant price estimates of the gross domestic product and national income of Jamaica over the period 1950-1958; and

(3) to analyse the changes which have taken place in real terms in the productive capacity of the Jamaican economy over the nine-year period.

SECTION I

Estimates of the Gross Domestic Product at Constant Prices

General Introduction

In Jamaica we are now in the fortunate position of having readily available in published form comprehensive accounts of the methods involved in and uses to which a system of national accounts in current money terms can be put. Reference is here made specially to the Thorne study of the national accounts of Jamaica, Mr. McFarlane's more recent work which resulted in the Central Planning Unit publication "The National Income of Jamaica 1956", and subsequent estimates for 1957 and 1958 compiled by Mr. Rose of the Department of Statistics. In all of these studies much attention has been paid to explaining the complex relationship which exists between such aggregates as production income and expenditure in Jamaica.

As far as national income estimates in constant prices are concerned there can be little doubt that these form a valuable adjunct to national estimates in current money terms.

If we accept the Thorne definition of the fundamental aims of national income accounting, namely: "One, to indicate the level of national economic welfare and changes in this level; the other, to present a clear picture of basic economic relationships between different sectors of the economy, and thereby reduce the possibilities of the adoption of incompatible and contradictory economic policies". And if we consider these aims in the context of the overall objective of Jamaica's National Plan 1957-67 to realize "dynamic or purposive planning in the general economic and social fields" then it is

clear that for both the national income accountant and for the economic planners, it is of vital importance to discover the changes, if any, which are taking place over time in the economy in *real* terms. In practice what this involves is a translation of current value estimates into estimates in terms of constant prices.

The Choice of Estimates to be Shown in Constant Prices

It has been generally recognized that it is difficult to convert all the entries of a system of accounts in current money terms into constant prices. Especially is this so in those cases where the information for the formulation of the price and quantity indices necessary for such detailed estimation is inadequate.

Many countries are now producing estimates of real production and real expenditure. Some restrict their efforts to the preparation of a single aggregate series in real terms while others prepare more detailed component series of both expenditure and production aggregates. In the case of Jamaica it should be possible to put out on an annual basis, together with the national accounts in current terms, estimates of the real domestic product subdivided by industries and categories of final expenditure, e.g. consumers' expenditure, general expenditure, expenditure on capital formation and stocks, expenditure on imports and exports and also some measure in real terms of Jamaica's terms of trade with the rest of the world. Such an exercise would make available real estimates covering those economic activities with which we are primarily concerned, i.e. production, distribution, consumption, capital formation and external trade.

As part of a more extended exercise one could also attempt to draw a comparison between real changes in the level of production and changes in the population in the occupied labour force in the various industrial sectors and in the hours worked, thereby obtaining some measure of the real change in national income per head and in the productivity of labour respectively.

Estimates of the Gross Domestic Product

Estimates of the gross domestic product in real terms represent two separate measures of the real productive capacity of the economy:

(a) the estimates of gross domestic product by industry of origin measure the real output within the various industrial sectors;

(b) the estimates of the gross domestic product by final expenditure measure the sum of the final expenditure on goods and services.

These two methods of estimating the gross domestic product correspond roughly to the "production approach" and to the "expenditure approach". Since real domestic product equals the final product flows of real consumption, real capital formation and real exports minus imports, one should expect each method to be capable of providing a convenient cross check to the other. Apart from the theoretical problems involved in attempting to obtain identical results from both approaches, limited staff resources, limited time,

and the existence of deadlines for producing national income estimates usually restrict production estimates at constant prices to one or the other method or a combination of the two, i.e., physical quantities or deflated values, depending on the availability of data. Naturally where both methods are combined care is necessary in maintaining consistency in the choice of indices used.

Having decided, however, according to the data available which method is the most practicable in the circumstances, one is then faced with the problem of the procedure to be followed in the treatment of the various product groups or various classes of expenditure. There are two basic methods of making estimates of the real gross domestic product. The first is the construction of quantity indices for the purpose of extrapolating base year output values. The second is the deflation of current value estimates of output by a price index to isolate the effect of changing prices from changes in the level of production.

Where the quantity data available for the formation of the index are good and in sufficient detail one can form quantity index numbers based on comprehensive data or using representative quantity samples or indicators. However, it may not be possible always to get quantity data sufficiently detailed or accurate for computing quantity index numbers. One can then deflate by means of price index numbers, either special price indices or general indices such as wholesale and retail prices provided that they permit an adequate coverage of the price field.

So far we have described the methods of procedure used in the compilation of index numbers for constant price estimation. There are, however, a few related problems to which brief reference may be made at this point; these concern: (a) the choice of the base period and the allocation of correct weights; (b) the type of index used and the choice between quantity or prices indices; (c) the basic assumption underlying the "production approach".

As far as (a) is concerned, it is generally recognized that the base year chosen for use in any index should represent normal levels of activity. In this exercise, for example, 1956 has been chosen for this purpose; however it is to be expected that in an economy undergoing fairly rapid economic development, the choice of the "normal" year must to some extent be arbitrary.

In the case of composite index numbers the problem of attaching the current relative weights to different items is of less importance since it has been found that slight variations in weights have much less effect on the final index than might be expected. The choice of the base period is closely related to the problem (b), i.e., the type of index used. In the construction, for example, of a suitable quantity index for extrapolation purposes, the use of one or other of these index forms might yield very different results. For example, in an economy where output has increased fairly extensively because of increased investment and developmental expenditure, relative prices might

fall, and fall most for those commodities whose output increases most. Yet if in the construction of a quantity index, use was made of current prices as weights instead of base year prices, the products whose outputs have expanded most might receive a smaller weight in the total. This downward bias in the use of the Paasche form of quantity index might thus obscure long term trends in production. On the other hand, in constructing a suitable price index for deflation purposes, the use of base year quantities as weights in a period of expanding output could cause the products in which the greatest expansion had taken place to receive a smaller weight in the total.

Throughout the following exercise, indices of the base weighted Laspeyres type rather than of the Paasche form have been used.

As far as the basic assumption underlying the production approach is concerned, our aim in deriving constant price estimates of the gross domestic product has been to arrive at the deflated value of *net* output of the various industrial groups. By definition net output refers not to the total of all net products resulting from output produced, but only to the deduction from gross output of the intermediate products consumed in the production of others. In making estimates of real net output, however, what is really done in practice is: (a) to construct indices based on changes in gross output; and (b) to assume that the changes in net output are of the same proportion as changes in gross output and can thus be used to deflate net output values.

The above method of procedure rests on the assumption that changes in the real net output of an industry are in the same direction and of the same magnitude as changes in the real gross product of that industry; in other words that the real input-out ratio of industry is constant. As the U.K. manual on "National Income Statistics" points out: "It is seldom possible to obtain a direct measure of changes in net output and sufficient information is not normally available to enable both gross output and gross input to be estimated in real terms. The difficulty of measuring changes in the quality of workmanship, changes in the cost of advertising per unit of output, etc. render impossible any other method of procedure than the one described above".

SECTION II

CONSTANT PRICE ESTIMATES OF THE GROSS DOMESTIC PRODUCT OF JAMAICA, 1950-1958.

TABLE 1. INDICATORS USED IN THE VARIOUS INDUSTRIAL SECTORS.

Industrial Sectors	Indicators Used
(1) *Agriculture*	
(a) Main export	Quantity index based on volume of production.
(b) Sugar cane	— ditto —
(c) Root crops	— ditto —
(d) Other primary	— ditto —
(2) *Fishing*	Quantity index based on volume of fish caught.
(3) *Forestry and Logging*	Deflation of value of net output by a price index of a selected number of different kinds of lumber by the following method: (a) collection of price data relating to certain types of lumber per 100 ft. (b) compilation of an index based on the average prices paid for the above types of lumber.
(4) *Mining*	
(a) Bauxite and alumina	Quantity index based on volume of bauxite mined.
(b) Gypsum and quarrying	(a) quantity index based on volume of gypsum mined. (b) quantity index based on the volume of cement supplies.
(5) *Manufacturing*	
(a) Food	Deflation of current value series for food manufacturing by a cost of living index for food items only.
(b) Sugar, etc.	Weighted index based on the relative shares of sugar, rum and molasses in total production.
(c) Aerated drinks, etc.	Weighted index based on the excise yields of beer and aerated drinks.
(d) Tobacco, etc.	Weighted index based on the relative shares of cigars and cigarettes in total production.
(e) Textiles, etc.	Weighted quantity index based on supplies of local and imported cotton piece goods and cotton fents.
(f) Footwear	Quantity index based on footwear production.
(g) Wood products	Composite price index based on imports of wood in unfinished form, wages and salaries paid and on employment in registered wood product factories.
(h) Furniture, etc.	Quantity index based on the volume of imports of mahogany into the island.
(i) Printing, etc.	Composite price index based on changes in yield from newspaper advertising revenue, wages and salaries paid in printing and on imports of printing materials.
(j) Leather, etc.	Quantity index based on the number of hides processed.
(k) Chemicals	Weighted index based on relative shares of matches and soap in total production.
(l) Cement and clay products	Index based on local and imported supplies of cement.
(m) Metal products	Price index based on imports of base metals, wages and salaries paid and employment in registered metal product factories.
(n) Miscellaneous	Index based on price relatives of the charcoal item in the cost of living index.
(6) *Construction and Installation*	Price index based on local supplies of building materials and on imports of machinery, equipment and vehicles.
(7) *Public Utilities*	Composite index based on estimates of water consumption and electricity production.

TABLE 1. INDICATIONS USED IN THE VARIOUS INDUSTRIAL SECTORS. (Continued)

Industrial Sectors	Indicators Used
(8) *Distribution*	Weighted price index based on average unit values of imports and exports and on retail prices of local manufactures and foodstuffs.
(9) *Transportation, Communication and Storage*	(a) Weighted index based on revenue earned from the transport of passengers and freight by the railways; (b) index based on consumer expenditure on road, water and air transport; (c) index based on the number of telephones in service and on cable and wireless messages received and relayed; (d) combined import and export quantity index.
(10) *Banking, Insurance and Real Estate*	(a) index based on number of cheques stamped and issued to the commercial banks and private businesses; (b) index based on average number of insurance policies in force at the beginning and end of each year; (c) quantum index based on value of new mortgage loans issued and on number of land transfers.
(11) *Ownership of Dwellings*	Price index based on rent item in the cost of living index.
(12) *Central Government* (13) *Local Government*	Index based on changes in salaries paid in ten representative grades of central and local government.
(14) *Education*	Index based on the number of pupils enrolled in secondary grant-aided schools and at the University College of the West Indies.
(15) *Medical and Health*	Index based on the number of doctors, surgeons, nurses and midwives practising in the island.
(16) *Recreation and Entertainment*	Index based on the gross yield from entertainment duty.
(17) *Hotels, Restaurants and Clubs*	Quantum index based on the number of long-stay visitors to the island.
(18) *Domestic Services* (19) *Laundries and Personal Services* (20) *Religious, Welfare Legal and Trade*	Deflation of consumers' expenditure on these items individually by cost of living price index and application of derived indices to net output in the respective sectors.

Comments on Individual Items: Areas Where Future Refinement of Estimates Possible

(1) *Gypsum and Quarrying Item.* The extrapolation of "Quarrying" separately by use of a quantity index based on the volume of cement supplies is not altogether satisfactory since it is based on the assumption of a constancy in the ratio of cement to quarry stone.

(2) *All Sectors Where Indices Based on the Deflated Values of Consumers' Expenditure on the Given Item Have Been Used.* Generally speaking there are two main disadvantages attached to the use of cost of living indices as deflators. The first disadvantage lies in the transfer to the deflated totals of any inherent biases resulting from the methods of construction of the indices concerned in the cost of living indices themselves. In the case of ex-

penditure on food, for example, the use of a general cost of living index for deflation purposes, even when restricted to food items only, will be more or less approximate.

It can be argued that movements in cost of living indices based on working class budgets are unrepresentative of changes in the cost of living of residents generally. In addition, such indices may not adequately reflect changes in consumption patterns over time. However, in the absence of any other prices collected on the same systematic basis, one is forced to use such indices, provided that the above-mentioned bias is fully recognized.

Some Comments on the Gross Domestic Product at Constant Prices

It is apparent from a perusal of the estimates of the gross domestic product given in Table 2 which follows, that there has been a slower overall rise in the gross domestic product in real terms over the eight-year period. The following points can be made in this connection:

(1) The annual average rate of increase in the value of the gross domestic product during the years 1950-1953 was approximately 15 per cent in terms of current prices and roughly 6.6 points at constant prices.

(2) Between 1953 and 1956 the average annual increase of 14 per cent in the value of the gross domestic product was to some extent a monetary illusion, since in constant prices the average annual increase in the gross domestic product was only 11 per cent.

(3) The years 1957 and 1958 being exceptional for Jamaica, the one being a year of great prosperity, the other a depressed period, have been isolated for purposes of comparison. Here again the steep rise in the gross domestic product in current prices between 1956 and 1957 of 21 per cent, only 12 per cent represents a real increase in this aggregate. As one might expect, the fall-off in economic activity in 1958 is reflected in the slower growth of the gross domestic product at both current and constant prices, the former being 25 per cent and the latter only 15 per cent over the 1956 total. It is also evident that the gap between the increase in gross domestic product at current and constant prices appears to narrow under depressed conditions, and *vice versa*.

(4) Over the entire eight-year period the gross domestic product in constant prices would be approximately 9 per cent per annum compared with a rate of increase at current prices of 14 per cent per annum.

(5) As far as the individual industrial sectors are concerned, the declining trend in net output of the agricultural sector is a feature of both the current and constant price estimates.

(6) In the manufacturing, and construction and installation sectors, it appears that over the period 1950-1958 only approximately 56 per cent of the average annual increase in the case of the former and 66 per cent in the case of the latter can be accounted a *real* increase. If for purposes of comparison we isolate the years 1953-1958, approximately

TABLE 2. GROSS DOMESTIC PRODUCT AT CONSTANT PRICES, 1950-1958.

£'000

Industry by Sub-Sections	1950	1951	1952	1953	1954	1955	1956	1957	1958
1. *Agriculture, Forestry and Fishing*	20,825	20,409	20,466	23,603	25,304	26,501	25,715	26,389	26,344
a. Agriculture — Main Export	3,647	3,390	3,460	5,036	5,462	5,981	5,835	5,648	4,843
Cane	5,054	4,922	5,054	6,169	6,891	7,022	6,563	7,022	6,366
Root crops	4,790	4,629	4,468	4,186	4,065	4,267	4,025	3,502	3,421
Other primary	6,594	6,647	6,501	7,046	7,591	7,783	7,676	8,374	9,702
b. Fishing	517	541	564	628	652	676	795	935	1,056
c. Forestry	223	280	419	538	643	772	821	906	956
2. *Mining*	209	295	1,323	2,931	5,864	6,951	8,660	11,558	15,223
a. Bauxite — alumina	—	—	1,047	2,570	5,395	6,470	8,051	10,902	14,200
b. Gypsum and Other quarrying	209	295	276	361	469	481	609	656	1,023
3. *Manufacturing*	11,868	12,313	13,224	15,353	16,903	18,965	20,719	23,864	23,752
a. Food	2,799	2,719	2,895	3,860	4,431	4,641	5,208	5,808	5,678
b. Sugar, rum and molasses	3,318	3,318	3,360	3,864	4,242	4,620	4,200	4,397	4,217
c. Aerated drinks, beer, wine, etc.	415	542	671	800	858	1,048	1,296	1,479	1,597
d. Tobacco (cigars and cigarettes)	920	966	1,042	1,067	1,077	1,132	1,171	1,421	1,501
e. Textiles and garments	736	603	953	953	868	1,073	1,206	1,327	1,266
f. Footwear	35	121	128	130	144	219	288	289	348
g. Wood products (excluding furniture)	508	514	503	492	447	488	559	594	618
h. Furniture and fixtures	372	352	489	646	763	1,292	1,957	2,703	2,241
i. Printing, publishing, advertising, other paper products	196	341	371	602	826	920	1,089	1,218	1,354
j. Leather products (excluding footwear)	68	68	82	100	103	104	100	116	118
k. Chemical products (including matches)	887	906	884	778	788	840	849	1,020	1,018
l. Cement and clay products	508	719	610	775	886	1,053	1,219	1,515	1,613
m. Metal products and repair	914	939	1,002	1,026	1,187	1,236	1,252	1,579	1,801
n. Miscellaneous manufactures	192	205	234	260	283	299	325	398	382

TABLE 2 (Continued)

£'000

	Industry by Sub-Sections	1950	1951	1952	1953	1954	1955	1956	1957	1958
4.	*Construction and Installation*	6,795	9,548	10,176	10,567	11,097	14,330	20,152	22,339	20,445
5.	*Public Utilities*	683	781	866	903	988	1,086	1,220	1,413	1,537
6.	*Distribution*	14,013	14,954	16,667	20,146	22,288	24,346	25,699	30,665	31,058
7.	*Transportation, Communication and Storage*	7,649	7,544	7,495	8,189	8,720	9,788	10,548	12,418	12,326
8.	*Banking, Insurance, Real Estate*	4,244	4,683	5,115	5,646	6,449	7,161	7,413	8,308	9,311
9.	*Ownership of Dwellings*	4,866	4,983	5,181	5,447	5,694	6,004	6,183	6,249	6,085
10.	*Central Government (excluding Enterprises)*	5,250	6,930	7,218	8,153	8,829	8,198	10,204	11,311	10,775
11.	*Local Government*	700	744	690	859	885	1,024	1,047	1,276	1,657
12.	*Services*	10,841	12,325	14,034	15,365	17,431	19,205	20,936	22,533	23,530
	a. Education	663	708	764	922	955	1,045	1,124	1,337	1,506
	b. Medical and health	956	984	1,014	1,066	1,175	1,194	1,267	1,257	1,406
	c. Recreation and entertainment	798	950	719	824	837	1,020	1,308	1,368	1,598
	d. Domestic services	3,877	4,433	5,524	5,933	6,547	6,615	6,820	6,881	6,628
	e. Hotels, restaurants, clubs	1,359	1,902	1,863	2,135	2,756	3,455	3,882	4,453	5,004
	f. Laundries, personal services	1,311	1,350	1,890	2,121	2,661	3,201	3,857	4,489	4,628
	g. Religious, welfare, trade	1,430	1,566	1,835	1,738	1,815	1,952	1,933	1,906	1,859
	h. Legal	447	432	425	626	685	723	745	842	901
	Total gross domestic product at constant prices	87,943	95,509	102,455	117,162	130,452	143,559	158,496	178,323	182,043
	Indices of gross domestic product total at constant prices	55	60	64	75	82	90	100	112	115

(10)

(9)

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82 per cent of the average annual increase in output in the manufacturing sector and 71 per cent in the construction and installation sector represent a real increase.

(7) The average annual rate of increase in real output since 1953 in the mining sector of 50 per cent in current prices when deflated represents an average annual rate of increase of approximately 42 per cent in real terms.

(8) Unlike Central Government, where the increase in real product since 1950 has been appreciably less than the rise in money terms would suggest, the net output of Local Government in real terms approximates more closely to that in money terms, possibly because of the greater stability over the period in wage and salary costs which were largely responsible for the inflation of the net output of Central Government over the same period.

(9) In the case of Public Utilities, Ownership of Dwellings, the average annual rate of increase in output in real terms over the eight years was 76 per cent that in money terms in the case of the former and 45 per cent in the case of the latter.

(10) As one might expect, a large part of the increase in net output of the distributive sector in money terms represents price changes. This is also true of the increase in the contribution to net output of the insurance and real estate and services sectors since 1950.

TABLE 3. Gross Domestic Product at Factor Cost by Industry of Origin at Current Prices

£ m.

Industries	1950	1951	1952	1953	1954	1955	1956	1957	1958
Agriculture, Forestry and Fishing	21.6	22.1	25.8	22.6	24.0	25.6	25.8	26.6	26.8
Mining				2.6	4.8	6.5	8.7	16.9	17.5
Manufacturing	7.9	9.2	11.6	14.7	16.9	18.3	20.7	24.4	24.9
Construction and Installation	5.3	8.9	10.3	10.4	10.5	12.9	20.1	26.1	24.5
Public Utilities	0.8	0.8	0.9	0.7	0.9	1.0	1.2	1.8	1.9
Transportation, Communication and Storage	5.0	5.3	5.6	7.0	8.3	9.5	10.5	12.3	12.8
Distribution	10.6	13.0	15.5	18.3	20.0	22.9	25.7	31.9	33.3
Ownership of Dwellings	4.1	4.3	4.6	5.2	5.7	6.0	6.2	6.4	6.6
Central Government	4.2	5.6	6.0	6.2	6.8	8.2	10.2	11.1	11.4
Local Government				0.7	0.7	0.8	1.0	1.3	1.7
Miscellaneous Services	10.5	12.4	14.6	15.1	16.9	18.8	21.0	24.2	25.6
Banking, Insurance and Real Estate				3.1	4.3	5.1	7.4	9.0	11.7
Total	70.1	81.7	95.0	106.7	119.7	136.4	158.5	191.9	198.7
Indices of Gross Domestic Product Total at Current Prices	44	51	60	67	75	86	100	121	125

TABLE 4. GROSS DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF ORIGIN AT CONSTANT PRICES.

£ m.

Industries	1950	1951	1952	1953	1954	1955	1956	1957	1958
Agriculture, Forestry and Fishing	20.8	20.4	20.5	23.6	25.3	26.5	25.7	26.4	26.3
Mining	0.2	0.3	1.3	2.9	5.9	6.9	8.7	11.5	15.2
Manufacturing	11.9	12.3	13.2	15.4	16.9	19.0	20.7	23.9	23.7
Construction and Installation	6.8	9.5	10.2	10.6	11.1	14.3	20.1	22.3	20.4
Public Utilities	0.7	0.8	0.9	0.9	1.0	1.1	1.2	1.4	1.5
Distribution	14.0	15.0	16.7	20.1	22.3	24.3	25.7	30.7	31.0
Transportation, Communication and Storage	7.6	7.5	7.5	8.2	8.7	9.8	10.6	12.4	12.3
Banking, Insurance and Real Estate	4.2	4.7	5.1	5.6	6.4	7.2	7.4	8.3	9.3
Ownership of Dwellings	4.9	5.0	5.2	5.4	5.7	6.0	6.2	6.2	6.1
Central Government	5.3	6.9	7.2	8.2	8.8	8.2	10.2	11.3	10.8
Local Government	0.7	0.7	0.7	0.8	0.9	1.0	1.0	1.3	1.6
Services	10.8	12.3	14.0	15.4	17.4	19.2	20.9	22.5	23.5
Total*	87.9	95.5	102.5	117.2	130.5	143.5	158.5	178.3	182.0
Indices of Gross Domestic Product at Constant Prices	55	60	64	75	82	90	100	112	115

*Totals rounded.

TABLE 5. INDICES OF GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AT CURRENT PRICES.

Industries	1950	1951	1952	1953	1954	1955	1956	1957	1958
Agriculture, Forestry and Fishing	63	64	75	87	93	99	100	103	104
Mining				30	55	75	100	194	201
Manufacturing	38	44	56	71	82	88	100	118	120
Construction and Installation	26	44	51	52	52	64	100	130	122
Public Utilities	66	66	75	58	75	83	100	150	158
Transportation, Communication and storage	48	51	53	67	79	90	100	117	122
Distribution	41	50	60	71	78	89	100	124	129
Ownership of Dwellings	66	70	74	84	92	97	100	103	106
Central Government	37	50	53	61	67	80	100	111	112
Local Government				70	70	80	100	130	170
Services	37	44	51	72	80	89	100	115	122
Banking, Insurance and Real Estate				42	58	69	100	122	158
Indices of Total Gross Domestic Product at Current Prices	44	51	60	67	75	86	100	121	125

TABLE 6. INDICES OF THE GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AT CONSTANT PRICES.

Industries	1950	1951	1952	1953	1954	1955	1956	1957	1958
Agriculture, Forestry and Fishing	61	60	64	92	98	103	100	103	103
Mining				34	68	80	100	133	176
Manufacturing	57	59	64	74	81	91	100	114	114
Construction and Installation	34	47	50	52	55	71	100	111	110
Public Utilities	56	64	71	74	81	89	100	116	126
Distribution	54	58	65	78	87	94	100	119	120
Transportation, Communication and Storage	72	71	71	77	82	92	100	117	116
Ownership of Dwellings	79	81	84	87	92	96	100	101	98
Central Government	53	68	70	80	86	80	100	111	105
Local Government				80	90	100	100	122	158
Services	52	60	67	74	83	92	100	108	112
Banking, Insurance and Real Estate				76	86	97	100	112	126
Indices of Total Gross Domestic Product at Constant Prices	55	60	64	75	82	90	100	112	115

SECTION III

CONSTANT PRICE ESTIMATES OF INDIRECT TAXES

As in the case of subsidies, these totals of indirect taxes were broken down into various categories, e.g., excise duties, customs duties, etc. Since in the case of Jamaica a breakdown was available of excise duties specific to particular products it was possible to re-value the estimates of excise duties in current value terms by regarding the duty per unit of quantity excisable as a price index. On the other hand the base year value totals of customs duties were deflated by use of an average value index of imports. As far as warehouse fees were concerned the base year value of this item was extrapolated by using an import-export quantum index. The amalgamated current price totals of stamp duties, entertainment tax and the miscellaneous item (including fees and fines and sales of stores) were deflated by using an index of retail prices.

TABLE 7. INDIRECT TAXES, 1950-1952: CURRENT PRICES, CALENDAR YEAR BASIS.

Item	1950	1951	1952
(1) Customs Duties	3,824	4,666	4,668
(2) Excise Duties	2,146	2,441	2,681
(3) Warehouse Fees	52	39	39
(4) Other	1,666	1,691	1,660
Total	7,688	8,837	9,048

TABLE 8. VALUE OF INDIRECT TAXES IN CURRENT AND CONSTANT PRICES: CUSTOMS DUTIES, 1950-1958

£'000

Items	1950	1951	1952	1953	1954	1955	1956	1957	1958
Customs Duties									
Current Prices	3,824	4,666	4,668	4,943	5,513	6,487	7,809	8,798	9,729
Average Value Index of Imports	71.9	85.6	91.1	84.9	82.2	91.0	100.0	104.6	103.9
Constant Prices	5,318	5,451	5,124	5,822	6,707	7,128	7,809	8,411	9,364
Current Prices Percentages	50.0	59.7	59.8	63.3	70.6	83.1	100.0	112.7	124.5
Constant Prices Percentages	68.1	69.8	65.6	74.5	85.9	91.3	100.0	107.7	119.9

TABLE 9. VALUE OF INDIRECT TAXES IN CURRENT AND CONSTANT PRICES: WAREHOUSE FEES — 1950-1958

£'000

Items	1950	1951	1952	1953	1954	1955	1956	1957	1958
Value of Warehouse Fees									
Current Prices	52	39	39	36	45	32	30	25	22
Import Export Quantum Index	56	57	59	71	77	88	100	112	109
Constant Prices	17	17	18	21	22	26	30	34	33

TABLE 10. EXCISE DUTY YIELDS IN CONSTANT PRICES.

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
(1) Rum	727	781	823	904	1,050	1,111	1,224	1,299	1,298
(2) Beer	169	212	279	336	381	433	446	504	557
(3) Sweets	—	—	—	—	—	—	—	—	3
(4) Tobacco	1,014	1,159	1,254	1,434	1,632	1,881	2,059	2,100	2,200
(5) Edible Oil	10	10	14	16	19	20	24	26	29
(6) Matches	43	50	55	47	45	50	51	45	—
(7) Coconut Oil Products	48	54	53	58	53	55	60	63	64
(8) Aerated Waters	22	29	32	34	37	41	55	58	59
(9) Cornmeal	4	3	4	3	4	2	3	5	6
(10) Sugar	87	158	175	256	259	255	274	235	200
Total	2,124	2,458	2,684	3,087	3,481	3,847	4,196	4,355	4,416

TABLE 11. STAMP DUTIES, ENTERTAINMENT TAX AND OTHER MISCELLANEOUS INDIRECT TAXES IN CURRENT AND CONSTANT PRICES

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
Current Prices	1,666	1,691	1,660	1,428	906	1,072	1,440	1,801	1,588
Constant Prices	2,400	1,876	1,672	1,432	923	1,076	1,440	1,755	1,468

TABLE 12. TOTAL INDIRECT TAXES IN CONSTANT PRICES, 1950-1958

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
(1) Customs Duties	5,318	5,451	5,124	5,822	6,707	7,128	7,809	8,411	9,364
(2) Warehouse Fees	17	17	18	21	22	26	30	34	33
(3) Excise Duties	2,124	2,458	2,684	3,087	3,481	3,847	4,196	4,355	4,416
(4) Stamp Duties, Entertainment Tax, Miscellaneous	2,100	1,876	1,672	1,432	923	1,076	1,440	1,755	1,468
Total	9,559	9,802	9,498	10,362	11,133	12,077	13,475	15,555	15,281
Total: Indices	71	73	71	77	82	89	100	107	113

The constant price estimates given in the above table suggest that while the total yield from indirect taxes rose by 29 points between 1950 and 1956 and 13 points between 1956 and 1958, the yield from customs duties rose by 32 points from 1950-1956 and by 20 points between 1956 and 1958. The yield from excise duties in constant prices on the other hand showed much less fluctuation over the period.

The increase in excise duties in constant prices between 1953 and 1958 was approximately 43 points compared with the rise of 44 points in excise duties over the same period.

CONSTANT PRICE ESTIMATES OF SUBSIDIES

We have arrived at our constant price estimates of subsidies by deflating the current price series for this item by value indices. These value indices were derived by estimating the subsidies paid to individual products or industries per unit of the product concerned.

As in the case of the item "Increase in Stocks" we have been able to arrive at a more detailed estimate of subsidy payments in constant price for the years 1953-1958. For the years previous to 1953 it has been necessary to deflate as a single item the global total of subsidies without breaking this total down on an industrial sector basis. This yielded the following totals for subsidies paid in thousand pounds:

1950	1951	1952
£310	£376	£508

The current and constant price estimates of the value of subsidies is shown below:

In the case of subsidies to agriculture, we were able to obtain the constant price estimates of this item by using an average value index covering the "Other primary" category of agriculture which is the main beneficiary from agricultural subsidies. The constant price estimation for agriculture is shown separately below in Table 14.

TABLE 13. CONSTANT PRICE ESTIMATES OF SUBSIDY PAYMENTS BY GOVERNMENT, 1953-58.

£'000

Item	1953	1954	1955	1956	1957	1958
(1) Manufacturing	17	18	28	30	—	—
(2) Distribution	70	61	45	45	—	—
(3) Transport	307	340	379	403	531	478
(4) Services	—	—	—	—	96	95
(5) Agriculture	100	111	86	85	59	32
Total Subsidy Payments, Constant Prices	494	530	538	563	686	605

TABLE 14. VALUE OF SUBSIDIES PAID BY GOVERNMENT IN CURRENT AND CONSTANT PRICES.

£'000

Item	1953	1954	1955	1956	1957	1958
Subsidies Paid to Agricultural Sector	95	107	85	85	59	42
Average Value Index	95	96.6	98.5	100	100.6	128.9
Subsidies Paid to Agricultural Sector in Constant Prices	100	111	86	85	59	32

As far as the subsidy to transport is concerned, this forms the largest part of the total of subsidies paid. The bulk of the transport subsidy reflects the deficit on the operations of the Jamaica Government Railway. In order to deflate this total a special index had to be constructed in the following way. The value of the subsidy of an annual basis per ton of freight carried and per passenger carried had to be worked out. This index was then weighted according to the contribution made by passenger and freight traffic respectively to total railway revenue from these two sources. A composite price index was thus obtained and this price index was then applied to the totals of subsidies paid to transport in each year.

In the case of the manufacturing and distribution subsidies the retail price

TABLE 15. SUBSIDY ON TRANSPORT.

Year	Subsidy £'000	Subsidy per Ton of Freight £	Subsidy per Ton %	Subsidy per Passenger Carried	Subsidy per Passenger %	Weighted Value Index	Constant Price Est. of Subsidy on Transport by Deflation
1950	328	.98	185	.42	113	166	197
1951	377	.97	183	.45	121	166	227
1952	350	.86	162	.38	103	148	236
1953	463	.87	164	.45	121	151	307
1954	374	.61	115	.36	97	110	340
1955	372	.53	100	.35	94	98	379
1956	403	.53	100	.37	100	100	403
1957	303	.30	57	.25	67	51	531
1958	793	.84	158	.70	189	166	478

index was used for deflating these totals. A detailed breakdown of the various categories of subsidy in constant prices in 1952 is largely a reflection of the large size of this item in the current estimates.

In 1959 the cause of the increase in the item is a direct result of the diminution of the deficit paid to the railway and the increase in real output of the railway in that year.

SECTION IV

The Expenditure Totals at Constant Prices

Constant price estimates have been derived for personal consumption expenditure by deflating current values of personal consumption expenditure by the retail price index for urban and rural areas.

This is the conventional approach used in other countries. There has been some suggestion that the coverage of the retail price index which is now being compiled in Jamaica is inadequate in certain respects and that a reweighting exercise is expected to be carried out at the Department of Statistics in the immediate future. When the results of this exercise are available it should be possible to recalculate constant price totals for personal consumption expenditure on the basis of the new retail price index available. The fact remains, however, that the present retail price index is essentially a working class index and as such is not entirely satisfactory.

Comparison of Personal Consumption Expenditure Totals at Current and Constant Prices.

The main points which emerge from a perusal of the current and constant price estimates of personal consumption expenditure can be briefly summarized as follows:

(1) From 1952 to 1956 the movement in personal consumption expenditure at both current and constant prices was very similar, a fact which can be accounted for by the stability of the retail price index over the period.

(2) In the two years prior to 1952 the rise in personal consumption expenditure in current prices was almost entirely absorbed in price increases, since personal consumption expenditure in constant prices remained constant over the period. The increase in personal consumption expenditure between 1951 and 1952, however, was a "real" increase in the sense that consumers got more goods for the extra money.

(3) After 1956 and especially in 1958 the pronounced rise in the cost of living index depressed the constant price estimate of personal consumption expenditure in that year much below that of the current price estimate.

TABLE 16. PERSONAL CONSUMPTION EXPENDITURE AT CURRENT AND CONSTANT PRICES

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
Personal Consumption Expenditure (Current Prices)	67,800	76,880	89,220	97,262	106,569	121,029	131,330	145,842	155,610
Personal Consumption Expenditure at Constant Prices, Deflated by Cost of Living Index	85,498	85,327	89,849	97,547	108,633	121,515	131,330	142,146	143,817
Personal Consumption Expenditure at Current Prices (percentages)	51.6	58.5	67.9	74.0	81.1	92.1	100.0	110.0	118.7
Personal Consumption Expenditure at Constant Prices (percentages)	65.1	65.0	68.4	74.3	82.7	92.5	100.0	108.2	109.5

Three Individual Components of Personal Consumption Expenditure. A Comparison of Current and Constant Price Estimates.

Food and Drink. We have used the cost of living index relating to food items (which includes drink according to the definition of this item in the Department of Statistics) to deflate totals of personal consumption expenditure on this item as follows:

TABLE 17. PERSONAL CONSUMPTION EXPENDITURE ON FOOD AND DRINK AT CURRENT AND CONSTANT PRICES.

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
Current prices	32,950	37,244	43,262	47,238	50,858	56,402	59,948	63,971	68,933
Constant prices	42,792	41,847	41,478	45,729	50,605	55,678	59,948	61,748	62,270
Current prices (percentages)	54.9	62.1	72.2	78.7	84.8	94.1	100.0	106.7	115.0
Constant prices	71.4	69.8	69.2	76.3	84.8	92.8	100.0	103.0	103.9

Comparing the constant and current price estimates of personal consumption expenditure on food and drink for individual years, it appears that be-

tween the years 1950-1956 there was a general increase in personal consumption expenditure in real terms, with the exception of 1951 and 1952. This increase has been at a slower rate than that of personal consumption expenditure in money terms except for the two-year period 1952-1954. Since 1956, however, the steep rise in retail prices of foodstuffs and drink has resulted in a decline in real personal consumption expenditure relative to personal consumption expenditure in money terms.

TABLE 18. PERSONAL CONSUMPTION EXPENDITURE ON RENT, WATER, FUEL AND LIGHT AT CURRENT AND CONSTANT PRICES.

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957*	1958*
Current prices	6,372	6,829	7,338	7,646	8,378	9,003	9,324	9,867	10,570
Constant prices	8,096	8,473	8,756	8,679	9,097	9,272	9,324	9,607	9,742
Current prices (percentages)	68.3	73.2	78.7	82.0	89.8	96.5	100.0	105.8	113.3
Constant prices (percentages)	86.8	90.9	93.9	93.1	97.6	99.4	100.0	103.1	104.5

*Urban Index alone available for years prior to 1957.

Personal Consumption Expenditure on Rent, Water, Fuel and Light at Constant Prices. In applying the retail price index covering "rent" to current price estimates of personal consumption expenditure, it was necessary to amalgamate items 5 and 6 of Table 2 dealing with the Composition of Personal Consumption Expenditure in the Jamaica National Accounts. The reason for this has been that the "rent" item in the retail price index includes expenditure on rent, water, sewerage and electricity.

For a glance at the constant price estimates of expenditure on rent, water, fuel and light, it appears that in real terms there has been a much smaller increase in personal consumption expenditure than the current price figures suggest. The reason for this can be traced directly to the behaviour of the retail price index for rent over the period. Between 1950 and 1956 more than 50 per cent of the entire rise in personal consumption expediture on rent was absorbed by "price" increases – namely increases in the "rent" item in the cost of living.

GENERAL GOVERNMENT CONSUMPTION EXPENDITURE

The components of this item include principally compensation of employees and net purchases of goods and services by general Government. Deflation of this category of expenditure often presents difficulties because of the sharp changes over time in the pattern of Government expenditure.

In our real estimates of general Government consumption expenditure we have followed the procedure (also used in Trinidad) of re-arranging General Government Consumption Expenditure by type of expenditure rather than by purpose of expenditure as follows:

(1) Compensation of employees;
(2) Purchases from enterprises and abroad less purchases by households and enterprises.

These two sub-totals have been deflated separately. Compensation paid to Government employees has been deflated by a wage index covering selected Civil Service occupations.

The following categories of employees were covered by the index:

(1) *Central Government*
- (a) Assistant Secretary
- (b) Engineer
- (c) Agricultural Officer
- (d) Assistant Building Officer
- (e) Executive Officer II (Senior Clerk)
- (f) Clerical Officer I (First Class Clerk)
- (g) Stenographer and Typist (Female Clerk Grade III)
- (h) Postal Assistant
- (i) Male Orderly Grade I
- (j) Labourer (Male)

(2) *Local Government*
- (a) Assistant Secretary to a Board
- (b) Clerical Officer
- (c) Public Health Inspector
- (d) District Midwife
- (e) Inspector of Poor
- (f) Master – Almshouse
- (g) Turncock Grade I (Plumber Grade I)
- (h) Market Clerks (Grade I and Grade II)
- (i) Superintendent – Fire Brigade (Parish Grading "C")
- (j) Assistant Superintendent (Roads and Works)

The index calculated for deflating private consumption expenditure was applied to the other component of Government Consumption Expenditure, namely, purchases of goods and services.

In the total of Central Government Consumption Expenditure all Government expenditure as current account is included except (a) subsidies and (b) grants to Parish Councils. In the total of Local Government Consumption Expenditure all current expenditure by Local Authorities on Goods and Services is included as well as current transfer payments made by such bodies.

It should be noted that the figures of wages and salaries paid by the Central Government for 1950-1952 are substantially higher than those given for 1953-58. The reason for this is that the figures for 1950-52 are based on Thorne's study of the "Size, Structure and Growth of the Economy of Jamaica". In Thorne's own words the actual expenditure by the Central and Local Governments on salaries and wages could not be ascertained and estimates were made. In addition, it appears that Thorne included in his estimates pension funds as part of the compensation of employees. Such pension funds are, however, included as transfer payments in subsequent

national income estimates. It is also possible that Thorne's wages and salaries estimates may be inflated by his inclusion of current expenditure on primary schools, infant centres, etc. which is also included under "Current Transfer Payments" since 1953. The difficulty of separating the various components included by Thorne under "Compensation of Employees" has forced us to use the global estimates which he has given. As a result the deflated totals for 1950-1952 are not strictly comparable with those for 1953-1958.

TABLE 19. CENTRAL GOVERNMENT CONSUMPTION EXPENDITURE IN CURRENT AND CONSTANT PRICES.

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
Consumption Expenditure on Wages and Salaries									
Current Prices	3,790	5,270	5,430	3,448	3,979	4,657	5,605	6,008	6,410
Wage and Salary Index (Central Govt. Employees)	72.0	72.0	75.6	76.3	77.2	100.0	100.0	100.0	105.9
Constant Prices	5,264	7,319	7,182	4,519	5,154	4,657	5,605	6,008	6,053
Expenditure on Goods and Services									
Current Prices	2,060	2,600	2,665	5,347	5,435	6,457	8,228	8,792	9,625
Consumption Index	76	87	93	91	90	94	100.0	104	105
Constant Prices	2,710	2,988	2,865	5,876	6,040	6,869	8,228	8,454	9,167
Total Constant Prices	7,974	10,307	10,047	10,395	11,194	11,526	13,833	14,462	15,220
Constant Prices (Percentages)	57.7	74.6	72.4	75.2	81.0	83.4	100.0	104.6	110.0

When we compare the totals of General Government Consumption Expenditure in current and in constant prices it is clear that the rise in total General Government Consumption Expenditure in current prices of some 77 points over the period 1950-1958 was to a large extent due to price changes. In real terms the increase in General Government Consumption Expenditure was much less, being approximately 56 points over the nine-year period. An especially interesting trend in the estimates of expenditure at constant prices is that the changes in expenditure in both current and constant price terms since 1955 have been nearly of the same order. However, for the years prior to 1955 there have been significant variations in the rate

TABLE 20. LOCAL GOVERNMENT CONSUMPTION EXPENDITURE IN CURRENT AND CONSTANT PRICES

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
Consumption Expenditure on Wages and Salaries									
Current Prices	514	565	552	687	708	819	1,047	1,269	1,684
Wage and Salary Index (Local Govt. Employees)	67.0	80.0	80.0	80.0	80.0	80.0	100.0	100.0	100.0
Constant Prices	700	744	690	859	885	1,024	1,047	1,269	1,684
Expenditure on Goods and Services									
Current Prices	336	375	366	937	1,117	1,166	1,341	1,783	1,371
Consumption Index	76	87	93	91	90	94	100.0	104	105
Constant Prices	442	431	393	1,030	1,241	1,240	1,341	1,714	1,306
Total Constant Prices	1,142	1,175	1,083	1,889	2,126	2,264	2,388	2,983	2,990
Constant Prices (Percentages)	47.8	49.2	45.3	79.2	89.2	94.8	100.0	125.0	125.2

TABLE 21. TOTAL GENERAL GOVERNMENT CONSUMPTION EXPENDITURE IN CURRENT AND CONSTANT PRICES

£'000

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
Current Prices	6,700	8,810	9,013	10,599	11,239	13,099	16,221	18,082	19,090
Current Prices (Percentages)	41.3	54.3	55.6	65.3	69.3	80.7	100.0	111.1	117.6
Constant Prices	9,116	11,482	11,130	12,284	13,320	13,790	16,221	17,445	18,210
Constant Prices (Percentages)	56.2	70.8	68.6	75.8	82.2	85.0	100.0	107.6	112.3

of change in expenditure in constant prices. For example, between 1953 and 1955 General Government Consumption Expenditure rose 15 points in current prices. In real terms the rise was of the order of 10 points only.

CONSTANT PRICE ESTIMATES OF GROSS DOMESTIC FIXED CAPITAL FORMATION.

In order to arrive at constant price estimates of gross domestic fixed capital formation it is possible to divide expenditure on gross domestic fixed capital

formation into two parts as follows:
(1) expenditure on construction; and
(2) expenditure on installation.

In the case of installation the index used might be based on: (a) imports of plant and machinery; and (b) the costs of installation of such machinery.

For deflating expenditure on construction activity a construction index based on building material costs might be applied to total expenditure on construction activity.

The weighted indices of installation and construction might then be combined with a single capital formation index by using the ratios in respect of these two items of capital formation expenditure given in the publication "National Income of Jamaica, 1956".

In the case of both the construction and installation indices the lack of available information for the year 1950-1953 relating to: (a) labour costs per unit of labour employed; and (b) quantities of capital goods imported into Jamaica, has made it impossible to calculate a capital information index along the lines described above. As a result we have been forced to use at this stage of the exercise an adjusted "Building Materials and Machinery Cost Index".

In deriving the capital formation indices use was made of the following data:
(a) base weighted indices of average unit values of imported buildings (at c.i.f. values); (b) a second set of indices based on 1952, representing the percentage changes in the unit value of locally manufactured cement.

The weighted composite index was derived by applying weights in proportion to the total value of imported building materials and the value (*ex* factory) of cement representing production minus exports, and adjusted for changes in stocks.

TABLE 22. GROSS DOMESTIC FIXED CAPITAL FORMATION: CURRENT AND CONSTANT PRICES.

£ (m)

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958
(Current Prices)	6.9	12.2	13.7	14.1	17.3	21.5	38.8	52.1	47.4
(Current Prices) Percentages	18	31	35	36	45	55	100	134	122
(Constant Prices)	9.6	16.6	18.6	28.1	32.6	33.4	38.8	48.2	46.5
(Constant Prices) Percentages	25	47	48	72	84	86	100	124	120

From the above table it appears that in terms of real Gross Domestic Capital Formation, the rate of increase has been less than the current price estimates would suggest. The discrepancy is especially evident if we compare the current and constant price estimates for the year 1955 to 1957; while

the increase between 1955 and 1957 in current prices was 79 points, in real terms it was 38 points, still a substantial increase by any standards. In 1958 however, Gross Domestic Fixed Capital Formation declined in both real and money terms.

Stocks in Constant Prices

Increase in Stocks

For the four-year period 1950-1953 it has been impossible to obtain a detailed breakdown of the value of physical change in inventories by industry groups. As a result it has been necessary in using the price deflation method of reducing stock series to constant prices to make use of a composite index of average values of exports and imports. The weights used in the composite index were derived from the values of exports and imports given in the "Rest of the World Account" for Jamaica over the period concerned.

TABLE 23. Value of Physical Change in Inventories at Current and Constant Prices.

£'000

Item	1950	1951	1952	1953
Value of physical change in inventories				
Current Prices	950	475	849	1,105
Composite Index of Average Import and Export values	74	87	91	89
Constant Prices	1,283	546	933	1,241

By far the largest part of stocks in any one year are held by the distribution sector. However, stocks of export commodities from the agricultural and mining sectors are also important.

Over the period 1954-1958 we were able to make use of the values of physical change in inventories available by industrial classification. These were then deflated by sectional price indices as follows:

Main Export, Cane, Other Primary and Bauxite and Alumina. The item "Main Export" includes bananas, cocoa, coffee cherry, citrus fruit, ginger and pimento crops. Indices based on the average unit values of these crops were derived and used to deflate current values of the physical change in stocks of these commodities. The same procedure was followed in the case of "Cane", "Other Primary" and "Bauxite and Alumina".

Gypsum and Quarrying. In the case of Gypsum and Quarrying actual stocks in physical quantities were used in estimating the change in stocks in constant prices by means of revaluation of the value of stocks of gypsum at the base year price. From such data it was possible to derive estimates of year to year stock changes in real base year terms.

Other Stocks. The constant price estimates of manufactured goods have been derived by using "price" indices of the individual products to deflate current price stock totals. In the case of the "Gas, Electricity and Water" item an electricity price index was used.

The "storage" item in the "Transportation, Communication and Storage" sector was deflated by a composite unit value index of imports and exports. Stocks held in the distributive and service sectors were reduced to constant prices by using a composite index based on (a) unit values of imports and exports and (b) the local retail price index.

TABLE 24. VALUE OF PHYSICAL CHANGE IN INVENTORIES IN CONSTANT PRICES.

£'000

Items	1954	1955	1956	1957	1958
Agriculture, Forestry and Fishing	30	32	113	–43	194
(a) Main export	66	67	–	27	27
(b) Cane	–	–	–3	47	–4
(c) Other primary	–36	–35	116	–117	171
Mining	–2	–	–	724	743
(a) Bauxite and alumina	–	–	–	722	761
(b) Gypsum and quarrying	–2	–	–	2	–18
Manufacturing	145	1,049	–575	1,056	2,543
(1) Food	–118	–116	190	64	–134
(2) Sugar, rum and molasses	236	1,153	–1,457	143	558
(3) Aerated drinks, beer and wine	–17	–19	18	14	108
(4) Tobacco	186	202	153	225	–3
(5) Textiles and garments	27	21	121	282	6
(6) Footwear	25	38	88	–39	–87
(7) Wood products	33	35	41	24	18
(8) Furniture and fixtures	–256	–299	26	54	59
(9) Printing, publishing and advertising	–3	–4	15	0.94	–3
(10) Leather products	3	3	–14	–18	49
(11) Chemical products	17	21	39	135	35
(12) Cement and clay products	–6	–7	212	119	–269
(13) Metal products and repairs	18	21	–7	46	77
(14) Miscellaneous manufactures	–	–	–	6	–7
Construction and Installation,					
Gas, Electricity and Water	–27	–32	25	14	33
Distribution	1,587	2,321	3,070	2,736	1,702
Transportation Communication and Storage	62	70	–28	–29	–
Banking Insurance and Real Estate	–	–	–	233	325
Services (representing mostly hotels, restaurants and clubs)	–123	–144	233	24	76
Total Value of Physical Change in Inventories in Constant Prices	1,672	3,296	2,838	4,715	3,480

EXPORTS AND IMPORTS IN CONSTANT PRICES

In order to arrive at constant price estimates of the value of exports it was necessary to prepare a composite export index derived from two different indices, one an export price index and the other a local price index covering those services which are currently exported. The use of the export price index provided a means of deflating the element of merchandise exports included in total of export values. In the same way the element of services included in the total of exports from Jamaica was covered by using as deflators the average value indices of expenditure by visitors to Jamaica over the period. In Trinidad, the deflation of the Services item is achieved by use of the consumer price index on the assumption that the prices of export services moved in the same way as retail prices. The validity of such an as-

sumption is, however, capable of being challenged and as a result the method of procedure described above has been adopted in this exercise.

In the case of merchandise imports, since value indices for imports are based on c.i.f. values, the use of such indices for deflation purposes makes it possible to cover not only changes in the prices of imports f.o.b. but also changes in the cost of insurance and freight.

In the case of imports of services, the totals of this item were deflated by average value indices of expenditure by Jamaican residents abroad. Tables 25 and 26 below show the deflated totals of imports and exports over the eight-year period.

TABLE 25. EXPORTS IN CONSTANT PRICES.

£m.

Items	1950	1951	1952	1953	1954	1955	1956	1957	1958
Domestic Merchandise Export									
Current Prices	14.8	16.6	17.2	24.5	29.9	32.4	38.2	49.5	48.1
Constant Prices deflated by export price index	18.9	18.5	18.6	26.1	31.4	32.5	38.2	42.6	44.5
Export of Services									
Current Prices	3.8	4.0	7.2	6.9	7.1	8.6	7.7	10.7	13.1
Constant Prices	4.6	5.8	8.9	7.8	5.8	7.3	7.7	9.8	11.5
Total Exports of Goods and Services in Constant Prices	23.5	24.3	27.5	33.9	37.2	39.8	45.9	52.4	56.0

TABLE 26. IMPORTS OF GOODS AND SERVICES IN CONSTANT PRICES.

£m.

Items	1950	1951	1952	1953	1954	1955	1956	1957	1958
Imports of Goods									
Current Prices	22.4	30.7	36.3	35.5	37.3	45.7	58.6	66.7	64.7
Constant Prices deflated by import price index	31.1	35.9	39.8	41.8	45.4	50.2	58.6	63.8	62.3
Imports of Services									
Current Prices	1.3	—1.7	—2.3	3.3	6.9	6.4	5.0	8.2	8.6
Constant Prices	1.7	—2.6	—3.6	4.2	6.9	6.6	5.0	8.9	8.9
Total Imports of Goods and Services in Constant Prices	32.8	33.3	36.2	46.0	52.3	56.8	63.6	72.7	71.2

THE GROSS DOMESTIC PRODUCT AT MARKET PRICES AND EXPENDITURE ON THE GROSS DOMESTIC PRODUCT.

So far we have considered in some isolation the various components of Account I of the U.N. set of accounts. In Tables 27a and 27b we have put the various items together to obtain two aggregates which are in principle identities namely: (a) the gross domestic product at market prices; and (b) expenditure on the gross domestic product.

While the individual components are in themselves interesting they have already been commented on elsewhere. What principally concerns us here is the change in the gross domestic product in Jamaica, per unit of population, at market prices.

A glance at Table 27b will show that between 1950 and 1952 while gross domestic product at market prices *per capita* increased by only 6.8 per cent per annum, on the average, the increase between 1952 and 1956 was 8.7 per cent and between 1956 and 1957 alone by almost 10 per cent. On the average the annual rate of increase *per capita* expenditure on the gross domestic product at market prices was approximately 7.1 per cent over the entire eight-year period.

TABLE 27a. ACCOUNT I. GROSS DOMESTIC PRODUCT AT CONSTANT PRICES.

£m.

Items	1950	1951	1952	1953	1954	1955	1956	1957	1958
Gross Domestic Product at Factor Cost	87.9	95.5	102.5	117.2	130.5	143.5	158.5	178.3	182.0
Indirect Taxes	9.6	9.8	9.5	10.3	11.1	12.0	13.5	14.5	15.3
Less Subsidies	.3	.4	.5	.5	.5	.5	.6	.7	.6
Gross Domestic Product at Market Prices	97.2	104.9	111.5	127.0	141.1	155.0	171.4	192.1	196.7
Population of Jamaica ('000)*	1,417	1,444	1,472	1,503	1,532	1,554	1,580	1,611	1,651
Gross Domestic Product at Market Prices per Head (£)	68.6	72.6	75.7	84.5	92.1	99.7	108.5	119.2	119.1
Index	63	67	70	78	85	92	100	110	110

*Pre-census estimates of population.

TABLE 27b. EXPENDITURE ON THE GROSS DOMESTIC PRODUCT AT CONSTANT PRICES.

£m.

Items	1950	1951	1952	1953	1954	1955	1956	1957	1958
Personal Consumption Expenditure	86.5	85.3	89.8	97.5	108.6	121.5	131.3	142.1	143.8
General Govt. Consumption Expenditure	9.1	11.5	11.1	12.3	13.3	13.8	16.2	17.4	18.2
Gross Domestic Fixed Capital Formation	9.6	16.6	18.4	28.1	32.7	33.4	38.8	48.2	46.4
Increase in Stocks	1.3	0.5	0.9	1.2	1.6	3.3	2.8	4.7	3.5
Exports of Goods and Services	23.5	24.3	27.5	33.9	37.2	39.8	45.9	52.4	56.0
Expenditure on the Gross Domestic Product and Imports	130.0	138.2	147.7	173.0	193.4	211.8	235.0	246.8	267.9
Less Imports of Goods and Services	32.8	33.3	36.2	46.0	52.3	56.8	63.6	72.7	71.2
Expenditure on Gross Domestic Product	97.2	104.9	111.5	127.0	141.0	155.0	171.4	192.1	196.7

The National Income at Constant Prices

The national income of a country is usually estimated by adding together the totals of:

(a) income from local economic activity; (b) the undistributed profits of corporations; (c) income tax; and (d) general Government income from property and enterprises. However, since the national income is the same as the net national product at factor cost we have been able to arrive at constant price estimates of the national income by estimating the value of the net national product at factor cost. In practice this means translating into constant prices the following three aggregates:

(a) gross domestic product at factor cost; (b) net factor income payments from the rest of the world; and (c) provisions for the consumption of fixed capital.

We have already given a very detailed account elsewhere of the methods used in estimating the real gross domestic product at factor cost. In the case of the net factor income payments from the rest of the world, these were deflated by using import price indices covering the period 1950 to 1958 for the following reason. In Jamaica, the standard situation appears to be that of an import surplus with a smaller net factor income payments flow from the rest of the world which may be positive or negative from time to time. It thus seems reasonable to deflate flows of net factor income payments from the rest of the world by an import price index since in the case of a positive net factor income flow by so doing we would be measuring the real increase in the volume of further imports which this factor income flow makes possible. When the net factor income flow is negative, the existing import surplus is increased by the amount of the flow overseas and the use of an import price index thus appears to be also appropriate. The total of provisions for the consumption of fixed capital was reduced to constant price terms by using a capital formation index derived from the constant price estimates of the gross domestic fixed capital formation.

An Appraisal of the Real Changes in the Gross Domestic Product and National Income Aggregates.

We can best sum up the main results of this exercise in deflating some of the national income aggregates for Jamaica as follows:

(1) As we have shown in a previous section of this paper, the rate of growth in real terms of the gross domestic product at factor cost was approximately 9.6 per cent per annum (compared with an annual rate of increase of 14 per cent in current prices) on the average. However, over the period 1950-1958 the rate of growth in real terms was somewhat uneven, being approximately 6.7 per cent between 1951 and 1952 and as high as 12 per cent between 1956 and 1957.

(2) In terms of the real national income per head, this showed an increase since 1950 from £59 per head to the 1957 total of £98 per head. In

TABLE 28. NET NATIONAL PRODUCT OR NATIONAL INCOME AT CONSTANT PRICES

£ m.

Items	1950	1951	1952	1953	1954	1955	1956	1957	1958
Gross Domestic Product at Factor cost	87.9	95.5	102.5	117.2	130.5	143.5	158.5	178.3	182.0
Net Factor Income Payments from the Rest of the World*	0.1	—.1	.6	—1.1	—1.5	—2.2	—4.7	—6.5	—6.2
Less Provisions for the Consumption of Fixed Capital	3.5	5.0	5.5	7.9	9.0	9.4	10.5	13.0	14.7
Net National Product (N. Inc. at Factor Cost (Constant prices)	84.5	90.4	97.6	108.2	120.0	131.9	143.3	158.8	161.1
Population of Jamaica ('000)	1,417	1,444	1,472	1,503	1,532	1,554	1,580	1,611	1,651
Real National Income per Head (£)	59.6	62.6	66.3	72.0	78.3	84.9	90.7	98.6	97.6
Index	66	69	73	79	86	94	100	109	108
National Income per Head at Current Prices Index (£)	50	57	66	72	79	88	100	117	115

*From 1953 this item is calculated on a new basis. See National Accounts: Income and Expenditure, 1958 and 1959 (Dept. of Statistics, Jamaica).

terms of 1956 = 100 this approximates to an average annual rate of growth of 5.9 per cent.

(3) A more useful comparison is afforded by considering changes in the real national income per head as against changes in money national income per head, as an indication of changes in the level of living. Bearing in mind that we are assuming away the problem of changes in income distribution, it appears that while national income per head in money terms increased on the average since 1950 by approximately 10.8 per cent per annum the annual increase in real national income per head was of the order of 5.9 per cent.

Labour Commitment Among Jamaican Bauxite Workers

A CASE STUDY[a]

By

ROBERT L. ARONSON

The creation of a labour force voluntarily committed to the system of incentives, discipline, and mobility characteristic of industrial employment in Western economies has been generally regarded as a significant problem in the industrialization of underdeveloped economies. Workers recruited to industrial jobs from the agricultural sector of such societies, according to this view, will have to undergo a major cultural and psychological transformation. Work patterns and rhythms will have to conform to the economic and technological imperatives of the factory system; new skills and the use of tools alien to the traditional culture will have to be learned; and a system of values and social relationships in which self-interest and individual achievement replace mutual obligation and status by ascription ultimately will have to be accepted. So great is the strain of this transformation, however, that in the initial stages of industrialization at least, the capacity of many workers to adapt to industrial work will prove inadequate. Instead, seemingly chronic problems of high labour turnover, excessive absenteeism, inadequate work performance, and ill-concealed resentment of supervision and discipline may be expected. The resultant low productivity and failure of workers to respond appropriately, for example to changes in relative wages and employment opportunities, hamper economic growth.

The case-study whose findings are reported in this article was a limited but systematic effort to determine empirically the nature and effects of some of the factors that may or may not result in a problem of labour commitment. Relatively little more than the results of casual observation is known about the conditions under which labour force instability and worker inefficiency emerge as serious problems, or about the factors that may tend to abate their

[a]The study on which this article is based was made possible by a Fulbright research grant to the author, in 1957-58, for which he wishes to acknowledge his gratitude. The many persons who were helpful during my stay in Jamaica will, I hope, identify their contribution to this article, even though space does not permit a personal reference to each of them. Nevertheless, I do wish to acknowledge the help and encouragement I received from M. G. Smith and the staff of the Institute of Social and Economic Research, Michael Manley and John Vickers of the National Workers' Union, Howard B. Major, Colin Gill, and others of Alumina Jamaica, Ltd., and Stuart J. DaCosta of the Industrial Development Corporation. Helpful comments on an early draft of the manuscript were received from Leonard P. Adams, George E. Cumper, William H. Knowles, H. Austin Peck, Orme W. Phelps, Simon Rottenberg, and John P. Windmuller, none of whom is implicated in the findings and conclusions.

emergence.[1] Though limited to the experience of a single company in the recently-established Jamaican bauxite industry, the findings of this study cast strong doubt on the inevitability of a problem of labour commitment as a feature of economic development. This general conclusion will be appreciated from the discussion in the following section in which the background facts and sources of data are briefly described. Subsequent sections of the article present data on and discuss the social and occupational origins of the work force recruited to Alumina Jamaica, Ltd., and the extent to which the workers had become a reasonably stable work force. A summary and an interpretation of the main findings are presented in a concluding section.

Background Factors and Sources of Data

The problem of labour commitment is apparently not a universal problem, as evidenced by the results of some recent studies.[2] A well-articulated account of the specific circumstances under which a problem of labour commitment may become significant, or of the factors that determine its magnitude, does not exist, however. Implicitly, the term appears to refer to an economy in the incipient stages of development, but still predominantly characterized by small-scale, subsistence farming to which potential industrial workers are strongly attached by familial or cultural ties. Among workers there is little experience of wage employment, levels of worker efficiency are low, and there is little occupational structure and specialization. The new industrial situation, on the other hand, may be supposed to command from workers a complete disengagement from the traditional rural society, regular attendance, disciplined performance on the job, and an understanding that their obligations and expectations in the employment relationship do not extend beyond the wage contract.

In Jamaica, some attributes of labour force and employment depart significantly from the assumed conditions, while in other respects — especially the immediate setting and the technological requirements of bauxite and alumina production — the situation closely approximates the conditions under which a problem of labour commitment might be expected.

[1]For a general statement see Clark Kerr, Frederick H. Harbison, John T. Dunlop and Charles A. Myers, "The Labour Problem in Economic Development: A Framework for a Reappraisal," *International Labour Review*, Vol. 71, 1955; for a review of findings, see Wilbert E. Moore, *Industrialization and Labor*, pp. 106-151. Cornell University Press, Ithaca, New York, 1951. Other studies of interest include James G. Abegglen, *The Japanese Factory*, The Free Press, Glencoe, Ill., 1958; W. Elkan, *An African Labour Force*. East African Studies No. 7, East African Institute of Social Research, Kampala, 1956; Walter Galenson, ed. *Labor and Economic Development*, John Wiley, New York, 1959; Peter Gregory, "The Development of an Industrial Labor Market," in Wilbert E. Moore and A. S. Feldman, eds., *Labor Commitment and Social Change*. Social Science Research Council, New York, 1960; Morris D. Morris, "Labor Discipline, Trade Unions, and the State in India," *Journal of Political Economy*, Vol. 63, 1955; Morris D. Morris, "The Supply of Labour to the Bombay Cotton Textile Industry, 1854-1951," *Indian Economic Journal*, Vol. 1, 1953; S. J. Ngcobo "The Response of Africans to Industrial Employment," *Race Relations Journal*, Vol. 21, 1954.

[2]Walter Galenson (ed.) *Labor and Economic Development*. John Wiley, New York, 1959.

Economic Development and Labour Force

Although systematic efforts since the second World War to diversify and strengthen the Jamaican economy are having some evident success,[3] in 1957 Jamaica was, in most respects, characteristic of countries in the incipient stages of economic growth. *Per capita* income then was variously estimated to be in the range of $200-300 (U.S.); unemployment was probably not less than 12 per cent of the active labour force, and underemployment continued to be a serious problem affecting perhaps as much as a third of the wage-earning population.[4] Agriculture, though its share of national output has been declining steadily,[5] continued to account for nearly half of the employed labour force as late as 1957.

Largely for historical reasons, however, the nature of employment in agriculture and certain critical attributes of the Jamaican labour force depart from the conditions posited earlier. Small-scale, subsistence farming, a strong attachment to traditional rural society, and an occupationally undifferentiated labour force are present to a lesser degree than might be expected in an economically underdeveloped country. Also, there is limited evidence that Jamaican workers respond favourably to industrial employment.

Even though emancipation in 1834 initiated the development of an independent peasantry[6], large-scale, commercial agriculture manned by a virtually landless rural proletariat has never ceased to be an important feature of agricultural production. Indeed, the recent development of small-scale farming and a distinct class of peasant farmers has been partly a result of deliberate social policy. Even as recently as 1942, for example, farms of 500 acres and over, though less than 1 per cent of all farms, accounted for almost 60 per rent of farm acreage.[7] Own-account employment in primary occupations, on the other hand, appears to have increased between 1942 and 1953[8], though not as a proportion of total island employment.

[3]Central Planning Unit, *Economic Survey, Jamaica*, 1957. The Government Printer, Kingston, 1958.

[4]Data from the 1953 sample survey of population (Department of Statistics, *Report on a Survey of the Population of Jamaica, October-November*, 1953. Kingston, mimeo, 1957) show that 40 per cent of male wage earners were employed 8 months or less during the previous year. For the active labour force as a whole, a later survey in 1957 (Department of Statistics, *Labour Force Survey*, 1957. Kingston, mimeo, 1958) shows that 35 per cent failed to secure more than 8 months of employment during the previous year, of which number more than half reported that they were unable to find that amount of work.

[5]Thorne's estimates show a decline in the share of the primary industries (mainly agriculture) in constant prices, from 45 per cent in 1938 to 30 per cent in 1952 (Alfred P. Thorne, *Size, Structure and Growth of the Economy of Jamaica*, Supplement, *Social and Economic Studies*, Vol. 4, No. 4, Table 12, University College of the West Indies, Jamaica). By 1956, the share of agriculture had fallen to 16.4 per cent, while mining had risen to more than 5 per cent. (Department of Statistics, *The National Income of Jamaica*, 1956. Kingston, 1958, mimeo.)

[6]Philip D. Curtin, *Two Jamaicas: The Role of Ideas in a Tropical Colony, 1830-1865*. Harvard University Press, Cambridge, 1955.

[7]Central Bureau of Statistics, *Eighth Census of Jamaica and Its Dependencies*, 1943, Tables 207-208. The Government Printer, Kingston, 1945.

[8]"Some Statistical Data on the Jamaican Labour Force, 1942-57" (n.d.) mimeo.

Preference for and strong attachment to agriculture and traditional rural society have not been features of Jamaican society for many generations, partly for historical reasons but, in the modern period, mainly because of low returns and the lack of capacity of agriculture to absorb the increases in labour force. Roberts' account[9], for example, makes it abundantly clear that the increasing drift to the city, especially between 1921 and 1943, has been due to the mounting pressure of population on increasingly scarce opportunities in the rural areas. More recently, between 1942 and 1953, the labour force outside of the Kingston-St. Andrew area grew almost twice as fast as that of the city, despite the relative decline in the contribution of agriculture to domestic product.[10] Data from the 1957 labour force survey also show that the proportion of workers with less than eight months of employment at their main occupations was about 29 per cent greater in the rural areas than in the metropolitan centre.[11] In the contemporary West Indian context, including Jamaica, these factors provide a sufficient explanation of the low preference for agricultural employment and, implicitly, rural life revealed in such studies as Rottenberg's investigation of unemployment in Antigua[12] and Smith's report on labour shortages in small-scale farming in Jamaica.[13] The fact that 2,000-3,000 Jamaicans are rather easily recruited each year for contract farm labour in the United States is also compelling evidence that agricultural work is not inevitably shunned because of unpleasant historical associations with slavery, as is sometimes asserted.[14]

An associated aspect of Jamaica's agricultural economy is the presence of substantial wage employment. In 1942, wage earners were about 37 per cent of the gainfully occupied population, and wage employment in the primary industries accounted for nearly three-fifths of total wage employment in that year. Since that time, wage employment has increased to more than 44 per cent of all employment, but mainly in the newly-expanding manufacturing and construction industries. Primary occupations now account for less than 43 per cent of total wage employment, and there is some evidence of a shift toward wage employment in the field side of estate agriculture.[15]

In contrast to industrially-advanced countries, where technology and education have virtually eliminated the unskilled worker, one expects to find little occupational structure in an economically underdeveloped country. To

[9]George W. Roberts, *The Population of Jamaica*, Ch. 5. Cambridge University Press, 1957.

[10]It must be conceded, of course, that part of the difference in rates of growth between the urban and rural labour forces may be due to such demographic factors as differences in the age structures and sex ratios of the two populations.

[11]Department of Statistics, *Labour Force Survey*, 1957, Table 22. Kingston, mimeo, 1958.

[12]Simon Rottenberg, "Income and Leisure in an Underdeveloped Economy," *Journal of Political Economy*, Vol. 60. 1952; Simon Rottenburg and Nora Siffleet, *Unemployment in Antigua*. Labour Relations Institute, University of Puerto Rico, Rio Piedras, 1952.

[13]M. G. Smith, *A Report on Labour Supply in Rural Jamaica*. The Government Printer, Kingston, 1956.

[14]W. Arthur Lewis, "The Industrialization of the British West Indies," *Caribbean Economic Review*, Vol. II, 1950.

[15]"Some Statistical Data on the Jamaican Labour Force, 1942-57" (n.d.) mimeo.

a substantial, but apparently declining, extent, this is true of Jamaica. In 1953, for example, 64 per cent of the male labour force was engaged in primary occupations or as unskilled labourers. If service workers are included, this proportion rises to nearly 7 of every 10 male workers.[16] The proportion of workers with more than one occupation, indicating lack of occupational specialization, was about one-fifth of the active labour force in 1957.[17] On the other hand, the literacy rate for the population over age 5 has increased four-fold since 1871 to its present level of about 80 per cent[18], though the adult population with secondary education in 1953 was less than 5 per cent.[19] Under the impact of various private and public schemes for vocational and professional education, the level of skill of the island labour force appears to be rising. Weekly earnings of skilled manual workers have been estimated as about 70 per cent above the level of unskilled workers, and white-collar professional and clerical workers in 1953 earned from three to six times as much as the unskilled.[20]

The performance and adaptability of the Jamaican as a factory worker is difficult to assess because of lack of comparability with conditions existing in industrially advanced countries. Various estimates of the efficiency of the Jamaican worker range from 25 to 100 per cent below that of workers in Great Britain and the United States.[21] A study of the experience of Jamaican workers in United States defence industries during the second World War, however, is often cited as evidence of their capacity to perform well in industrial jobs.[22] Conversations with managers and directors in more than a dozen manufacturing firms, in 1957-58, revealed little adverse comment on work performance. Even in a few foreign-branch plants, worker skill and efficiency were said to be nearly equal to those of workers in mainland United States, in the apparel industry, for example. It may be worth noting in this connection that casual observation indicates that Jamaican workers respond well when attention is paid to selection and placement, adequate training, and well-trained supervision — aspects of labour utilization that have been

16Department of Statistics, *Report on a Sample Survey of the Population of Jamaica, October-November*, 1953, Table 48. Kingston, mimeo, 1957.

17Department of Statistics, *Labour Force Survey*, 1957, Table 8. Kingston, mimeo, 1958.

18Department of Statistics, *Report on a Sample Survey of the Population of Jamaica*, October-November 1953. Kingston, mimeo, 1957; George W. Roberts, *The Population of Jamaica*. Cambridge University Press, 1957.

19Department of Statistics, *Report on a Sample Survey of the Population of Jamaica, October-November* 1953, Table 28. Kingston, mimeo, 1957.

20W. F. Maunder, *Employment in an Economically Underdeveloped Area*. Yale University Press, New Haven, 1960.

21George E. Cumper, "Two Studies in Jamaican Productivity," *Social and Economic Studies*, Vol. 1, No. 4, University College of the West Indies, Jamaica, 1953; International Bank for Reconstruction and Development, *The Economic Development of Jamaica*. The Johns Hopkins Press, Baltimore, 1952.

22George E. Sadler, "Wartime Utilization of Jamaicans in United States Industrial Establishments," *Monthly Labor Review*, Vol. 61, No. 5. U.S. Department of Labor, Washington, D.C., 1948.

ignored or neglected in a number of Jamaican industries,[23] possibly because of the general lack of specialization of management functions and the absence of intensive incentives to husband human resources.

Locality, Company and Union

Alumina Jamaica, Ltd. is one of the three North American companies that presently make up Jamaica's increasingly important bauxite mining and alumina extraction industry. In 1957, the industry's product accounted for 44 per cent of the value of total domestic exports, about 5 per cent of gross private domestic product, and about 15-17 per cent of government revenue. Because of the capital-intensive nature of the industry, however, it is unlikely that the three companies employed more than 4,000 workers in all of their various operations [24] in 1957-58, or considerably less than 1 per cent of employment in the private sector of the economy. Average weekly earnings of two and one-half to three times the average of most other industries place bauxite and alumina workers well near the top of the island's wage structure.

This study was made at the central location of Alumina Jamaica's expanding island operations, at the Kirkvine Works in Williamsfield, Manchester parish. Among the three companies, Alumina Jamaica is the only one that locally extracts alumina from the bauxite ore. A second but smaller mining and alumina extraction operation, under construction in 1958 but now in full operation, is located at Ewarton, in St. Catherine parish. Storage and port facilities are 32 miles away, at Port Esquivel.

Except for the main town of Mandeville, small-scale farming and service employments characterize Manchester parish. In 1953, about 52 per cent of heads of households in the parish were engaged in own-account employment in such occupations. Over the past few decades, the pressure of population[25] on limited employment opportunities in the parish has forced migration elsewhere; between 1943 and 1953, Manchester's population declined 13 per cent.

Given the rural setting of the parish from which much of the labour supply for Kirkvine Works might be expected to come, technology and process, and the characteristics and style of management, would seem to be favourable to the emergence of a problem of labour commitment. As practised in Jamaica by all three companies, mining is highly mechanized, using drag-lines and tractor-scrapers for removing the overburden and transporting the ore to the alumina plant. Alumina extraction is a continuous chemical process, requir-

[23]Ella Campbell, "Industrial Training Methods and Techniques," *Social and Economic Studies*, Vol. 2, No. 1, 1953; International Bank for Reconstruction and Development, *The Economic Development of Jamaica*. The Johns Hopkins Press, Baltimore, 1952; William H. Knowles, "Supervision in the British West Indies: Source of Labor Unrest," *Industrial and Labor Relations Review*, Vol. 8, No. 4. 1955.

[24]Including agricultural and afforestation operations, as well as mining, processing, and port facilities.

[25]Indicative of this pressure is the fact that Manchester's crude birth rate in 1956 was fourth highest among the island's parishes, while only five of the parishes recorded lower death rates in that year. (*Report on Jamaica*, 1956, Table 1, p. 55, The Government Printer, Kingston, 1957).

ing relatively large amounts of electrical power for handling and mixing materials and driving large rotating kilns. About 60 per cent of the work force at Kirkvine Works is therefore engaged in equipment maintenance and repair, or in auxiliary services, while the pace of operations is predetermined and largely controlled by the nature of the alumina extraction process. Thus, regular attendance, promptness in reporting to work stations, and alertness in performing operations and in observing safety regulations are crucial necessities.

Technology and process also have an important influence on employment relationships, at least under present conditions. Because the process of alumina extraction is near-automatic as well as continuous, plant workers are paid on a time basis. Work is organized on departmental lines, with two levels of supervision – plant and departmental. At the staff or plant level, largely because of the technology involved, professional and managerial employees are with few exceptions expatriates from Canada and the United Kingdom.

Management style largely follows the pattern of most firms in industrially-advanced countries. There has been little effort, and probably little need, on the company's part to undertake an all-embracing programme to develop housing, schools, local transport, or other social services of possible utility to itself, for example, in recruiting and retaining workers. Such developments have been left to individual and community initiative. On the other hand, the company has provided generous financial support to local and island religious, educational, recreational and health programmes. A number of individual employees have become active in some of these programmes. For management and certain key hourly-paid employees, company-owned housing is provided in the vicinity, however.

Almost since the beginning of operations in late 1952, collective bargaining has been established at Kirkvine Works. Hourly-paid workers are represented by the National Workers Union, an island-wide labour organization. Although membership is not compulsory, more than 90 per cent of the hourly-paid workers belong to N.W.U. In negotiations and major disputes, the workers are usually represented by officers from the union's headquarters in Kingston, but a locally-elected shop committee functions at all stages of a four-step grievance procedure. Several work stoppages have occurred in the comparatively brief history of labour-management relations at Kirkvine Works, the most recent of which was in September, 1958.

Sources of Data

Two sources provided data on the characteristics of Alumina Jamaica's hourly-paid work force and on the indicators of its commitment to industrial work. The personnel files of all regularly-employed workers whose employment terminated during 1953-57 provided data on the personal and occupational characteristics, and on the reasons for separation, of the 275 hourly-

paid workers who left Kirkvine Works during that period. It should be noted that the reliability of the data in these records, especially on the critical matter of the reasons for separation,[26] could not be verified. The other source of information was an interview with each of ninety-four hourly-paid workers in a sample systematically drawn from the company's payroll as of the week of March 2, 1958, and supplemented by data from their personnel records. The interviews,[27] lasting from thirty minutes to more than an hour in some cases, provided data on work experience, social backgrounds, and attitudes toward industrial employment generally as well as toward the workers' present jobs. Some information of limited usefulness was also obtained on recent changes in the workers' living patterns.

Social and Occupational Origins of the Work Force

The number of workers employed at Kirkvine Works in the spring of 1958 far exceeded initial plans. These called for a plant not much larger than a pilot-plant, since it was quite uncertain in 1952 whether or not alumina could be efficiently extracted from the iron-rich Jamaica bauxite. Shortly after this plant went into operation in late 1952, it was determined that the plant design was efficient, and plans for further expansion were immediately put into effect.[28] By the spring of 1958, Kirkvine Works had reached its present annual capacity of 500,000 dry tons of alumina, and hourly-paid employment had expanded four-fold to a level of more than 800 workers. About 1,200 employees, including salaried workers and a few temporary construction workers as well as the regular work force, were employed in March 1958.

In addition to expanding greatly the need for workers, the rapid expansion of the Kirkvine Works had two other significant effects on the problem of

[26] In most instances, the recorded reasons for separation appear to have been supplied by the employees where the separation was voluntary. Reasons for discharge, though naturally a matter of company judgment, were not always unambiguous and, in some instances, were interpreted by the author from other items in the employee's file.

[27] Since the interviewing situation was, for several obvious reasons (for example, that the author was an alien of European stock), less than ideal, a few observations on the procedures followed are of interest. Although voluntary, participation by members of the sample was exceptionally high and responses were thought to be reliable. Each member of the sample was sent a letter from the author, describing the latter's status and the purposes of the study, and assuring confidence of responses as well as complete freedom to refuse participation in the study. Only one worker refused to be interviewed, but five others could not be contacted or failed to meet appointments. The results of one interview were discarded because of incomplete data.

More than half of the sample work force was interviewed out of necessity on the company's premises, since a variety of work schedules and poor transport and communication facilities often made an off-premises interviewing site inconvenient for the workers as well as for the investigator. To minimize the possibility that in-plant interviews would distort responses, the choice of site was in every possible instance left to the worker. About a fourth of the 53 in-plant interviews were made at work stations during lunch-hour or other lengthy breaks; the remainder were conducted in a private office in the plant personnel department. Privacy in the interviewing situation and general knowledge of union as well as company approval of the study were probably favourable to free response. Off-premises interviews were usually conducted in workers' homes or lodgings.

[28] For a history and description of the operations at Kirkvine Works, see "The Story of Alumina Jamaica Limited", *The West Indian Review*, N.S. Vol. 2, No. 9. Kingston, 1957.

recruiting a stable and efficient work force. First, the construction of additional plant capacity created a sizeable pool of construction workers from which the company could, and did, recruit a number of plant workers. These workers had, as a result of their experience during the construction phase, gained a certain amount of skill in the use of tools and had become familiar with the requirements of a modern industrial discipline. At the same time, but only partly on that account, the rapid expansion of plant led to a decision to minimize formal orientation and induction procedures and, also, training in job skills both for supervisory and hourly-paid workers. This policy prevailed until 1957 when technical trades training was instituted for selected hourly employees and a Training Within Industry programme was conducted for all supervisory personnel at Kirkvine Works and Port Esquivel.[29]

Recruitment and Selection of the Work Force

During the period of plant expansion, the company suffered no lack of applicants for jobs. The magnitude of the numbers who hoped for jobs at Kirkvine Works may be appreciated from the fact that, for all of the company's operations in the island,[30] about 5,000 applicants were interviewed for employment in 1956 and 1957. Judged from the experience of the sample work force, most of those hired were self-recruited through such informal channels as friends and relatives employed by the company or direct application at the plant gate.[31]. Newspaper advertisements, however, were used to attract some workers with special skills, such as the maintenance trades. About 10 per cent of those hired were recruited to the operating payroll from among the workers engaged in the construction of the plant.

Education and physical capacity, rather than previous industrial experience, have, from the beginning, governed selection and hiring at Alumina Jamaica. Most applicants for hourly-rate jobs complete a fairly elaborate application for employment, which is itself indicative of the company's requirement of some primary-school education. An interview with a personnel officer and a medical examination follow for those in whom there is further interest. Workers are accepted for employment on a 60-day probationary basis.

Social Origins of the Work Force

From the data examined on social and occupational background, it will be seen that the hourly-paid workers at Kirkvine Works, though rural in social origin, had already become quite firmly attached to the industrial labour

[29]A comprehensive training and orientation programme was also developed and instituted in connection with the beginning of operations at Ewarton in 1959.

[30]Including three construction employers engaged in expanding Kirkvine Works and constructing the Ewarton plant.

[31]Until recently, public employment service operations were restricted to the Kingston metropolitan area, with the exception of special programmes in connection with government-sponsored industrial development. The schedules of 89 members of the sample work force show the following distribution of the methods by which they obtained their jobs at Aljam: newspaper advertisements, 6; friends or relatives at the plant, 29; other personal contacts, 9; gate application or letter, 32; company transfers, 11; hearsay, 2.

force before they became Aljam employees. For them at least, the alleged dichotomy between the two systems of values and social relationships was not a very great barrier.

Various data on place of birth, residential patterns, and the occupations of the fathers of the members of the sample work force all clearly indicate the latter's predominantly rural background. Data on parish of birth show that Kingston was reported by 12 per cent of the sample work force as the parish of birth, though on a simple chance basis,[32] 23 per cent of the workers could have been expected to come from the metropolitan area.[33] More than a third of the workers, on the other hand, had been born in Manchester, 11 per cent in adjoining Clarendon parish, and the remainder came from various other rural parishes. Census data on internal migration in 1953, moreover, confirm the likelihood that these workers were indigenous to the local area. In that period, migration into Manchester was relatively low; the percentage of the parish's population resident there for less than three years was only about 6 per cent, compared with about 9 per cent of the population of all parishes in the island.[34]

Data on commuting and residential patterns, in fact, show that a majority of the sample work force had been recruited from the immediate locality.[35] At the time of this study, less than half of the sample spent more than thirty minutes in one-way travel to work, and less than 20 per cent spent more than an hour.[36] About 11 per cent made the daily two-hour trip from Kingston to Kirkvine Works. The proportion of short-distance travellers (55 per cent of the sample) was about the same as the proportion that had lived in their present localities for more than 10 years; 45 per cent of the sample had lived in their present home localities for more than 15 years.

About a fourth of the sample were living in rented rooms or similar arrangements away from their household, but nine of ten of these workers were unattached single men.

As Table 1 shows, the industrial background of the fathers of the Aljam sample work force furnishes further evidence of the latter's rural origins. More than two-fifths of the fathers were engaged in farming, mostly, it appears, as independent own-account cultivators. In addition, many of those fathers classified as engaged in trades and services were also part-time farmers.

Industrial Background and Experience

Despite their rural background and residence, the sample work force as a whole had already become substantially assimilated into the industrial lab-

[32] i.e., assuming no differences in urban-rural age distributions.

[33] *Sample Survey*, Table 5.

[34] *Sample Survey*, Table 7.

[35] Company officers stated that residents of the local community were encouraged as a matter of personnel policy to apply for work at the plant.

[36] An efficient system of local transport undoubtedly would have reduced the commuting time even further.

TABLE 1. INDUSTRIAL BACKGROUND OF FATHERS OF ALUMINA JAMAICA SAMPLE WORK FORCE.

		%
All Industries	95	100.0*
Primary	40	42.1
Manufact., repair services and construction	13	13.6
Trade and services	29	30.5
Government n.e.c.	8	8.4
Unknown	5	5.3

*Percentages do not add to 100 because of rounding error.

our force before they became employees of Alumina Jamaica. Comparison of the sample's occupational attributes with those of the island's male labour force and the urban male labour force reveals a pattern more closely resembling that of the latter than of the former group. Table 2, in which sample work force data on age, education, occupation, industry, and employment status are arranged in categories comparable to those of the 1953 and 1957 surveys of population and labour force, show that the main deviations from the urban pattern are the greater youth and higher proportion of Aljam workers with secondary education. Both of these deviations are most probably the joint result of the physical and educational requirements for hourly-rated jobs at Kirkvine Works and an (informal) hiring policy favouring younger workers.[37] Their youth alone, however, does not explain the exceptionally high proportion of those with secondary or technical education among the Aljam workers: on a chance basis at least, the proportion with such an educational background in 1953 should not have been more than 6 per cent.[38] Apparently the company was attracting a work force of higher quality than might have been expected, and generally in excess of its minimum educational standard.

Work History and Mobility

Data on their industrial experience and mobility reveal something of the process by which these workers of largely rural origin became a part of the island's non-agricultural labour force. Attachment to the rural communities from which most of them came was apparently not strong enough to inhibit movement into jobs in manufacturing, construction and trade, often in Kingston and some other urban places, and the development of mobility patterns of wage-oriented industrial workers.

Aljam's hourly-paid workers had had a variety of industrial and occupational experience before entering the bauxite industry. Excluding the experience of five workers with no previous employment, the average number of previous jobs was nearly three per worker. Almost 75 per cent of the sample work force had had two or more previous jobs, and of these 40 per cent had worked in three or more industries. Even within the relatively limited indus-

[37]In practice, the company is reluctant to hire workers over age 40 unless they have certain skills, such as those of a maintenance electrician or machinist.

[38]*Sample Survey*, Table 26.

TABLE 2. PER CENT DISTRIBUTION OF SELECTED CHARACTERISTICS, ALUMINA JAMAICA HOURLY-PAID WORKERS[a] AND MALE LABOUR FORCE, JAMAICA AND URBAN JAMAICA[b].

	Aljam Workers (Mar. 1958)	Male Labour Force Jamaica 1953 (000)	Male Labour Force Jamaica 1957 (000)	Urban Male Labour Force, Jamaica 1953 (000)	Urban Male Labour Force, Jamaica 1957 (000)
Characteristic					
Total, all ages	N=95	380	405		115[c]
	%	%	%		%
Under 20	4.3	12.1	9.1	n.a.	10.3
20-29	50.0	27.1	25.4	n.a.	27.7
30-39	39.1	22.6	24.0	n.a.	27.7
40-49	4.3	19.5	21.0	n.a.	17.3
50 and over	1.1	18.9	20.7	n.a.	17.3
All educational standards	N=95	505[d]			
	%	%			
Elementary	64.2	74.9	n.a.	n.a.	n.a.
Secondary	16.3	4.8	n.a.	n.a.	n.a.
Practical or technical training only	16.3	1.0	n.a.	n.a.	n.a.
Never attended	1.0	16.4	n.a.	n.a.	n.a.
Not specified	3.2	3.2	n.a.	n.a.	n.a.
Occupations[e]	N=95[f]	380	405		103[g]
	%	%	%		%
Professional and managerial	2.1	2.4	3.9	n.a.	7.8
Crafts. and opers.	43.1	19.5	19.5	n.a.	37.8
Clerical and sales	17.9	7.4	7.1	n.a.	19.4
Unskilled manual and services	31.4	68.9	69.1	n.a.	34.9
No previous job or not specified	5.3	1.8	—	n.a.	—
All Industries[e]	N=95[f]	380	405	67	103[g]
	%	%	%	%	%
Primary	15.2	61.3	62.2	4.5	9.7
Manufacturing and repair services	17.4	10.5	9.6	22.4	22.3
Construction	22.8	5.0	9.4	5.9	16.5
Transport, communication and utilities	7.6	4.2	4.9	13.3	13.6
Trade and services	17.4	11.8	13.3	38.8	34.9
Government	14.1	—[i]	—[i]	—[i]	—[i]
No previous job or not specified	5.4	7.1	1.0	15.0	2.9
All employment statuses	N=95[f]	380	405		103
	%	%	%		%
Employers	—	1.0	1.4	n.a.	1.9
Own-Account	8.4	35.0	43.0	n.a.	18.4
Wage earners	85.3	52.6	50.6	n.a.	77.6
Unpaid family workers	1.0	7.9	4.9	n.a.	1.9
No previous job or not specified	5.3	3.5	—	n.a.	—

Sources: Aljam workers, live-file sample; 1953 data from *Sample Survey of the Population*, 1953; 1957 data from *Labour Force Survey*, 1957.

Notes: a. As of March 1958. b. October-November 1953; August-October 1957. c. 1957 age-distribution based on total population, age 15 and over; 92.4 per cent of the male population, age 15 and over, was in the "available labour force." d. Total population (male) 10 years of age and over. e. Occupational and industry categories for 1958 adjusted to 1957 definitions. f. Last job before accepting employment at Alumina Jamaica. g. Kingston and St. Andrew parishes and other main towns. h. Kingston and St. Andrew metropolitan area only. i. Census and survey data do not show government employment as a separate industry category.

trial scope of the Jamaican labour market, the job-changing patterns of this sample work force closely resembled those of workers elsewhere, with, for example, industrial and occupational attachment increasing with the number of job changes made.[39]

Table 3 demonstrates that most of the jobs previously held by members of the sample work force, including their first regular jobs, were outside of traditional agriculture. Indeed, as the members of the sample moved from job to job, agricultural employment became successively less important than employment in other industries. Employment in the services and transport also declined in relative importance, while construction and, to a lesser extent, manufacturing became relatively more important.[40]

In this context, it is of some interest to examine separately the job history of those workers whose first jobs were in agriculture and, for the most part, as own-account farmers and unpaid family workers. Of this group of twenty-nine workers, four came directly into employment with Alumina Jamaica. The tendency of the remainder to stay in agriculture on subsequent jobs, however, was only slightly greater than among all workers with two or more jobs and was accounted for largely by experience as contract farm labourers in the United States. The following tabulation compares the distribution of second and subsequent jobs for all those members of the sample with more than one previous job with that of such workers whose first jobs were in agriculture.

	All Workers With Two or More Jobs N=69	First Job in Agriculture N=25
Agriculture	19%	22%
Construction	22	43
Manufacturing	20	10
Trade and Services	19	15
Other industries	18	10

Data shown in Table 4 on the extent of geographic movement among members of the sample work force establish the extent of their experience with industrial or semi-industrial employment in an urban setting. About a third of all *jobs* held by the sample prior to coming to Kirkvine Works was in an urban place, but the proportion of *workers* who had ever worked in Kingston or in one of the other larger towns designated in Table 4 was even

[39]Among those members of the sample that had had two previous jobs, two-thirds had worked in two different industries, and 59 per cent in two different occupations, while among those with four previous jobs, the proportions were 29 and 21 per cent, respectively. For comparable data in a United States labour market, see Leonard P. Adams and Robert L. Aronson, *Workers and Industrial Change*. New York State School of Industrial Labor Relations, Cornell University, Ithaca, New York, 1957.

[40]This result is also quite consistent with the industrial mobility patterns of workers in South Africa and Puerto Rico. See Department of Economics, University of Natal, *The African Factory Worker*, pp. 51-52 and Appendix VII, Oxford University Press, Cape Town, 1950; Peter Gregory, "The Development of an Industrial Labor Market," in Wilbert E. Moore and A. S. Feldman, (eds.) *Labor Commitment and Social Change*. Social Science Research Council, New York, 1960.

TABLE 3. INDUSTRIAL SEQUENCE OF JOBS PREVIOUSLY HELD BY SAMPLE WORK FORCE (N=89).

Order of Jobs	No.	Per cent	INDUSTRY									
			Agriculture and Mining	Sugar Mfg.	Other Mfg.	Construction	Trade	Services	Government	Transport Communication	Casual Work
All Previous Jobs	244	100.0	24.1	12.2	6.9	15.9	4.9	15.1	13.1	6.1	1.6
First	88	100.0	33.7	11.2	6.7	2.2	6.7	18.0	13.5	7.9	—
Second	68	100.0	19.1	16.2	5.9	16.2	7.4	13.2	16.2	4.4	1.5
Third	42	100.0	26.2	9.5	11.9	16.7	—	19.0	14.3	2.4	—
Fourth	23	100.0	17.4	13.0	4.3	39.1	—	8.7	13.0	—	4.3
Fifth	9	100.0	11.1	11.1	—	33.3	11.1	11.1	—	11.1	11.1
Sixth	8	100.0	—	12.5	12.5	37.5	—	12.5	—	12.5	12.5
Seventh	4	100.0	—	—	—	75.0	—	—	—	25.0	—
Eighth	1	100.0	—	—	—	—	—	—	—	100.0	—
Ninth	1	100.0	—	—	—	100.0	—	—	—	—	—
Last Job	89	100.0	15.7	13.5	5.6	23.6	7.9	10.1	14.6	7.9	1.1

greater – 69 per cent of those members of the sample who had had one or more previous jobs. Of this group, nearly a third had worked at least once in Kingston.

Despite the substantial levels of unemployment and under-employment prevailing in the island, the mobility of the sample work force was largely a voluntary response to differentials in economic opportunity. More than three-fifths of all job separations were voluntary, and, like industrial workers elsewhere, the rate of voluntary job-changing tended to decline as the members of the sample work force gained experience in appraising jobs and the state of the labour market.[41] Rates of voluntary resignation, moreover, show a rough inverse correspondence with levels of average weekly earnings in the various

TABLE 4. NUMBER OF JOBS HELD PRIOR TO ALJAM EMPLOYMENT, BY LOCATION OF JOBS, SAMPLE WORK FORCE.

	All Jobs	Per cent	Last Job	Per cent
All Places	244	100.0	89	100.0
Kingston	42	17.1	17	19.1
Spanish Town	4	1.6	2	2.2
Mandeville	32	13.1	7	7.9
Montego Bay	1	0.5	—	—
Other Places*	165	67.6	63	70.8

*Includes off-island employment in United States and Canada, usually in contract labour programmes.

industry groups, but notably in construction and general manufacturing. It should be noted, however, that the relatively low quit rate in construction,

TABLE 5. VOLUNTARY SEPARATIONS AS A PERCENTAGE OF ALL SEPARATIONS AND AVERAGE WEEKLY EARNINGS, BY INDUSTRY.

	Voluntary Separations	Percent of All Separations	Average Weekly Earnings	
			Operatives	Unskilled
All Industries	161	65		
Primary	39	67	n.a.	50/8a
Manufacturing	29	60	n.a.	n.a.
Sugar	21	70	n.a.	n.a.
Other mfg.	8	44	53/10 - 100/8b	17/11 - 67/7b
Construction	18	41	105/8	56/6
*Trade	8	66	n.a.	n.a.
Services	32	84	65/- - 89/8c	34/1 - 59/3c
Government	27	75	82/6 - 127/6d	n.a.
Transport, etc.	8	66	56/- - 148/5e	30/ - 67/7f

a. Male workers, sugar estates, not including crop bonus. Estimated from contract daily rates.
b. Baking, cocoa, chocolate and sugar confectionery; soft-drinks and carbonated beverages; tobacco manufactures; footwear; furniture and fixtures; printing; leather tanneries; miscellaneous chemical products; metal products; and motor vehicle repair.
c. Hotels and laundries only.
d. Postmen.
e. Water services, road and rail transport, communications.
f. Does not include water services.
Wage data from Min. of Labour *Annual Report*, Table Va. 1955, Kingston.

41Of those workers with only one previous job, 81 per cent had quit that job; of those with two prior jobs, 66 per cent had quit that number of jobs; while of those with four or more previous jobs, only 17 per cent had quit that number of jobs. For comparison with workers in an industrial community in the United States, see Leonard P. Adams and Robert L. Aronson, *Workers and Industrial Change*, pp. 136-137. New York State School of Industrial and Labor Relations, Cornell University, Ithaca, New York, 1957.

shown in Table 5, probably understates the mobility rate in that industry, since about a tenth of the workers had transferred from the contractors who built Kirkvine Works to the company's manufacturing and mining operations.[42]

The Commitment to Industrial Work

In view of their industrial work experience and contacts with urban life, it is not surprising that there was little evidence of marked instability and lack of commitment among the sample work force at Alumina Jamaica. High rates of (voluntary) labour turnover, or of absenteeism, and major problems of discipline, worker dissatisfaction, or inadequate work performance were clearly absent. Among those workers who resigned or were discharged, on the other hand, the reasons for separation fit quite well with their personal and social characteristics and do not support a hypothesis that they were unable for cultural reasons to adjust to factory work. Indeed, the city-bred and industrially-experienced worker was more likely than his country cousin to exhibit instability, though the differences between the two groups are not extensive.

Labour Turnover

In the first five years of operations labour turnover rates have been close to accepted norms and show a steady decline toward a comparatively stable work force at Alumina Jamaica. In none of the five years has the average monthly turnover rate exceeded 3 per cent, but this figure is inflated by discharges and resignations of temporary workers,[43] especially during the early part of the period. Among operating employees the record appears to have been even more favourable. Table 6 shows data on turnover extracted from the annual reports of the personnel department for the years 1955-1957, and includes (for contrast) data on white-collar salaried employees as well as data respecting hourly-paid workers. Even though workers on the temporary payroll are represented, the rates shown in this table for hourly workers compare favourably with – or are no worse than – those for most manufacturing industries in the United States and Canada.[44]

Campbell's data for twenty-one Jamaican factories studied in 1951, on

[42]Although plant construction and manufacturing operations were technically independent corporate entities, they functioned as a unit with respect to hiring and employment.

[43]Engaged largely as force-account construction workers.

[44]Average monthly separation rates in U.S. manufacturing industries during 1953-1957 ranged from a high of 4.3 in 1953, to a low of 3.3 in 1955, (U.S. Department of Labor, *Monthly Labor Review*, Vol. 81, No. 12, p. 1434, 1958). Data for Canada, covering the period 1948-1957, show average monthly separation rates for all industries ranging from a low of 4.9 in 1950, to a high of 9.5 in 1951. High rates of 8.7 were reached in 1948 in both metal mining and manufacturing, and 11.1 in trade. Low rates for these industries all occurred in 1955 and were, respectively, 2.3, 3.6, and 4.1 (*Hiring and Separation Rates in Certain Industries*, September, 1954 to August, 1956, Table 9. Dominion Bureau of Statistics, Ottawa, 1957). For the year ended August 31, 1956, *annual* turnover rates for males were as follows: mining, 65; manufacturing, 57; construction, 211 (*Hiring and Separation Rates in Certain Industries*, March 1956 to February 1958, Table 2. Dominion Bureau of Statistics, Ottawa, 1958).

TABLE 6. LABOUR TURNOVER AT ALUMINA JAMAICA, LTD., 1955-1957.

	1955	1956	1957
Average Annual Employment	725	932	1111
Hourly Workers	530	680	826
Salaried Workers	195	252	285
Total Separations	174	200	257
Hourly Workers	164	165	204
Salaried Workers	10	35	53
Annual Turnover (%)	24.0	21.4	23.1
Implicit Average Monthly Turnover	2.0	1.8	1.9
Hourly Workers	2.5	2.4	2.1
Salaried Workers	0.4	1.2	1.6
Type of Separation (Hourly Only)			
Voluntary	n.a.	132	145
Involuntary	n.a.	33	59

Source: Unpublished annual reports of personnel department, Alumina Jamaica, Ltd.

TABLE 7. PERCENTAGE OF SEPARATED WORKERS WHO RESIGNED VOLUNTARILY, 1953-1957, BY SELECTED CHARACTERISTICS.
(N = 275)

	%
All Separated Workers	68
Age at Separation:	
Under 20	75
20 - 39	73
40 and over	53
Months of Service:	
Under 6	64
7 - 18	73
19 - 36	69
37 and over	67
Occupation:	
Skilled	65
Semi-skilled	65
Trade helper	83
Unskilled	61
Education:	
Primary	58
Secondary	83
Trade or technical	82
Prior Factory Experience:	
Yes	51
No	73
Marital Status:	
Single	73
Married or other	62
Parish of Birth:	
Kingston	81
Manchester	64
Other parishes	66

the other hand, show an average monthly turnover rate of 2.8; for nine factories with male employees only, the rate was 4.2[45]. Moreover, at Kirkvine Works there has been steady improvement in the company's turnover experi-

[45]Ella Campbell, "Industrial Training Methods and Techniques," *Social and Economic Studies*, Vol. 2, No. 1, Table X, 1953.

ence. Between 1954 and 1957, total separations for all reasons increased by 24 per cent, but employment increased by 91 per cent.

Characteristics of Separated Workers

During the period, 1953-57, 275 hourly-paid workers on the regular operating payroll left Kirkvine Works either voluntarily or by discharge for a variety of reasons. Resignations outnumbered discharges for cause by a little more than 2:1. Compared with the sample work force, the separated workers are distinguished by their comparative youth at the time of separation, a generally lower level of skill, less previous factory experience, but a generally higher level of educational attainment and a greater proportion with an "urban" background.[46] Predominantly, as shown in Table 7, these characteristics belong to the group which left voluntarily. Taken together, these differentiating characteristics suggest that the normally high mobility of young, relatively unattached workers was operative among the work force at Kirkvine Works, as it is in most labour markets in Great Britain and the United States.[47] There is little to suggest a lack of commitment to industrial work, at least in the sense of a preference for or strong attachment to rural society.

Further analysis of the characteristics of the terminated employees according to the reasons for their separation[48] indicates quite the contrary. Well over half of the 186 workers who resigned from the Aljam payroll during the period 1953-1957 left either because of an opportunity for a better job or because of dissatisfaction with pay and promotion opportunities at Kirkvine Works. Poor health, resignation to pursue advanced studies or to migrate abroad accounted for the bulk of the remainder. As a group these workers exhibit no social or occupational characteristics that suggest separation as an effort to disengage from the industrial labour market. Among those workers who left for "economic" reasons[49] on the other hand, skilled and semi-skilled workers, those with previous factory experience, and the Kingston-born tended to be slightly over-represented. Thus, it would appear that some experience and familiarity with industrial employment had raised the levels of aspiration and mobility among a majority of these workers, leading them to explore possibilities elsewhere — most presumably in the industrial labour market.

Seventy-five of the eighty-nine hourly-paid workers who were discharged were almost equally distributed between two categories of cause: a failure to meet work standards or for disciplinary reasons involving a variety of of-

[46] i.e., born in Kingston.

[47] For data on the characteristics of mobile workers in the United States, see Gladys L. Palmer, *Labor Mobility in Six Cities*. Social Science Research Council, New York, 1954; Herbert S. Parnes, *Research on Labor Mobility*. Social Science Research Council, New York, 1954.

[48] Detailed tables regarding the characteristics of the terminated employees and the reasons for separation are available from the author, on request.

[49] To accept an offer of a better job, to migrate abroad, or because of dissatisfaction with pay and promotion.

fences.[50] Among the remaining cases, in nine instances the probable cause of separation was not clear from the records; in two instances discharge was for a physical disability; and three other cases were not, in fact, discharges in the usual sense, but involved transfers to another payroll. Again, however, none of the differentiating characteristics within this group pointed toward a lack of commitment to industrial work.

Several differentiating characteristics among those discharged from the hourly payroll are worthy of comment. One of these is the relatively high proportion of work standard discharges among those with secondary and/or trade and technical education (36 per cent as against an expected proportion of 26 per cent). Another is the relatively high proportion of disciplinary discharges among skilled and semi-skilled workers (58 per cent as against an expected proportion of 48 per cent). Both of these observations are perhaps explainable more in terms of Jamaica's industrial and social history than in purely sociological or psychological terms. Industrial development in Jamaica in recent years has advanced more rapidly than the capacity of industry and educational institutions to adapt to the requirements of modern technology. Secondary schools, for example, have not yet accommodated their curricula to the possibilities of work in modern industrial establishments, nor has industry generally adopted careful procedures and practices in selecting, training, and supervising workers.[51]

Labour turnover, of course, may not be an especially significant indicator of lack of worker commitment in an underdeveloped economy. Where job opportunities are relatively scarce, it is conceivable that workers may "withdraw efficiency" on the job, expressing their lack of commitment in frequent absence (with or without leave) or in a variety of violations of work rules, which result in disciplinary action. Although neither of these kinds of behaviour has been a major problem at Kirkvine Works, the data obtained from the sample work force suggest that their occurrence is more likely among urban, industrially experienced workers than among the rural-born ex-farm workers.

Absenteeism

Data from the company's personnel department reports show a decline in the annual absence rate of 47 per cent,[52] from 6.8 in 1954, to 3.6 in 1957.

[50]The offences and the allowable penalties are specified in the collective agreement. Though the penalties are administered by management, they may be contested in accordance with the grievance procedure.

[51]Ella Campbell, "Industrial Training Methods and Techniques," *Social and Economic Studies*, Vol. 2, No. 1, 1953; William H. Knowles, "Supervision in the British West Indies: Source of Labor Unrest," *Industrial and Labor Relations Review*, Vol. 8, No. 4. 1955.

[52]Defined as the number of scheduled man-hours not worked for all reasons, excepting scheduled vacations, expressed as a percentage of scheduled man-hours. To arrive at a rate comparable to that usually employed in measuring absence, the data were adjusted by removing authorized vacation leave as a component of lost time on the assumption that advanced scheduling of work included provision for such leave. For a discussion of measurement and comparability of absence rates, see Theodore Vander Noot, Thelma Kund and Herbert G. Heneman, Jr., "Comparability of Absence Rates," *Personnel Journal*, Vol. 36, 1958.

Though the rate for the earlier year suggests some instability in the hourly-paid work force, it is within generally accepted limits. The rate for the more recent year compares favourably with a median absence rate of 3.5 for a sample of 125 U.S. manufacturing firms in 1956.[53] In Campbell's study, absence rates in nine Jamaican firms employing exclusively or predominantly male workers, for varying periods of observation in 1951, ranged from 1.54 to 9.24.[54]

Of particular interest is the trend at Kirkvine Works in "other absence," such as unpaid sickness, absence without leave, and disciplinary suspensions, which may reflect lack of commitment to industrial work. The decline in this kind of absence, however, has been even more rapid than the decline in the lost-time rate generally. From 1954 to 1957, the other-absence rate declined by 60 per cent, from a level of 3 per cent in the former year to 1.2 per cent in the latter year. These rates may be compared with the results of Behrend's study of forty-six factories in the United Kingdom in 1948, which uncovered an "other absence" rate for men of 1.7, with a range from 0.3 to 4.0 per cent of available working time.[55] The decline in the "other absence" rate at Kirkvine Works, in the face of an annual labour turnover of more than 20 per cent, rather than a lack of commitment suggests the presence of the frictions that inevitably emerge in establishing a new plant and building a work force.

As Table 8 shows, the absence pattern among the members of the sample work force provides little support for the presence of a problem of labour commitment. The median frequency of absence among these workers was 1.6, but ranged from 3.3 for absence due to certified illness to 1.6 for "other absence."[56] Relatively high absence frequencies were found among those workers with comparatively long service, among semi-skilled and unskilled workers, the more highly educated, those with no prior factory experience, but also those who were urban-born. Low absence frequencies appear to be associated with rural birth, primary schooling, short service, but also some previous factory experience and a skilled occupation.

In the context of this discussion, the fact that absence frequencies tended to be lower among those with a background in agriculture than among those with a non-farm occupational background is of special interest. Table 9 shows

[53]In this study, the median rate for all male workers was 2.5, and for production workers, 3.1.

[54]Ella Campbell, "Industrial Training Methods and Techniques," *Social and Economic Studies*, Vol. 2, No. 1, Table VIII. 1953.

[55]Hilde Behrend, *Absence Under Full Employment*, Monograph A3. University of Birmingham Studies in Economics and Society, 1951.

[56]These results are based on an analysis of individual payroll records from the date of first employment through the calendar year 1957. These records, however, were unaccountably incomplete, the most serious gap being the lack of data for three months in 1955. Because the individual "risk" of absence varies with length of service, the actual number of absences was converted to an annual frequency. Absence was defined as absence from duty extending beyond one shift for any reason other than vacation leave.

TABLE 8. MEDIAN ANNUAL FREQUENCY OF ABSENCE, ADJUSTED FOR LENGTH OF SERVICE, BY SELECTED CHARACTERISTICS, SAMPLE WORK FORCE.

All Characteristics	3.6
Age:	
Under 30	3.8
30 and over	3.6
Months of Service:	
18 or less	2.8
19 - 36	4.1
37 or more	3.8
Occupation:	
Skilled	3.1
Semi-skilled	4.0
Trade helpers	3.5
Unskilled	3.8
Education:	
Primary	3.4
Secondary or other	4.4
Prior Factory Experience:	
Yes	3.4
No	3.9
Parish of Birth:	
Kingston	4.4
Manchester	3.5
Other parishes	3.6

that those few workers whose last job prior to becoming Aljam employees had been in own-account farming had the *lowest* median annual absence frequency, while those workers who had never worked in agriculture had the highest rate. To the extent that absenteeism was a problem at Kirkvine Works, therefore, it cannot be attributed to the failure of the transformed rural worker to meet the standards of attendance required for factory work.

TABLE 9. ADJUSTED ANNUAL AVERAGE ABSENCE FREQUENCY, FORMER RURAL WORKERS AND OTHERS, SAMPLE WORK FORCE.

Frequency	All Workers	Last Job in OA Farming	Ever Worked in Agriculture*	Non-farm Background
None or under one	12	1	4	8
1–4	68	7	29	39
5–9	12	—	1	11
10 or more	2	—	—	2
Totals	94	8	34	60
Median frequency	3.6	3.1	3.2	3.8

*Excludes factory hands in sugar centrals; includes contract and estate work, and unpaid family workers on farms.

Worker Discipline

Notices of disciplinary offences filed with the individual worker's personnel record provide a further means of analyzing the extent and character of the commitment to industrial work.[57] Again, the company's personnel reports indicate that discipline has not been a major problem and that, in any case, the record has been improving since operations first began at Kirkvine Works. The annual average of recorded disciplinary notices has never exceeded one per worker since the beginning of operations, and by 1957 this ratio had been reduced by more than 50 per cent to 0.35 notices per hourly-paid worker.[58] Timekeeping offences, such as absence without leave, early quitting, late reporting, and sleeping or loafing on the job, constituted the largest category, accounting for one-half to two-thirds of all disciplinary notices throughout the period covered by this study. Another fourth of the notices issued involved lack of application on the job, while various personal behaviour offences, such as insubordination, horseplay, etc., accounted for from 4 to 8 per cent of the notices.

As shown in Table 10, various characteristics of the sample work force are differently associated with the two main types of disciplinary problem. In appraising this analysis, it is necessary to keep in mind that only a little more than a fourth of the sample received an average of one or more disciplinary notices per year. Problems of timekeeping were disproportionately high among long-service workers, the less educated, the unskilled, and the Kingston-born, whereas the expectation would be a relatively high incidence among the rural-born and those with short service as well as little education and skill. Generalization about the characteristics of those who received notices regarding their application on the job is virtually impossible, since only six workers were involved. Overall, however, it is a fair conclusion that the sample work force had probably adjusted quite well to the disciplinary system at Kirkvine Works.

Job Attitudes

Although no detailed effort was made to determine the extent to which members of the sample work force were themselves aware of problems of work adjustment, some observations on this aspect of labour commitment were obtained as responses to a question which asked them to compare their Aljam job with previous jobs. Overall most of the workers interviewed were satisfied with their Aljam jobs or even regarded them as the best jobs they had ever had. Only about a fifth of the sample was verbally negative or

[57]These notices are initiated, of course, by line supervisors in accordance with the schedule of disciplinary measures incorporated in the collective bargaining agreement. Workers charged with an offence by their foremen may or may not sign the notice which is placed in their files for each reported offence, but the failure to concur in the charge does not invariably lead to a grievance. That would depend largely on the severity of the disciplinary measures taken.

[58]Unfortunately, time did not permit analysis of the disciplinary records of former workers. It is quite possible that, by 1957, the more troublesome group in respect of discipline had terminated its employment, thereby reducing the incidence of discipline.

TABLE 10. PERCENTAGE DISTRIBUTION OF THOSE IN SAMPLE WORK FORCE RECEIVING ONE OR MORE DISCIPLINARY NOTICES BY TYPE OF NOTICE AND WORKER CHARACTERISTIC, 1953-1957
(N = 94)

	All Workers	One or More Notices		
		All Types	Time-Keeping	Work Application
Total	100.0	26.6	16.0	7.4
Age:				
Under 20	4.3	4.2	6.6	—
20 - 39	82.1	95.8	93.4	100.0
40 plus	5.4	—	—	—
Service:				
3 - 18	32.6	24.0	26.7	57.1
19 - 36	21.7	16.0	20.0	—
37 - 48	6.5	4.0	6.6	—
49 and over	39.2	56.0	46.7	42.8
Occupation:				
Skilled	15.4	3.8	—	14.2
Semi-skilled	45.1	61.5	46.7	71.4
Trade helper	13.2	7.7	13.3	—
Unskilled	26.4	26.9	40.0	14.2
Education:				
Primary	66.3	76.0	80.0	71.0
Secondary and other	33.2	24.0	20.0	28.2
Prior Factory Experience:				
Yes	46.0	46.0	40.0	57.0
No	54.0	54.0	60.0	43.0
Parish of Birth:				
Kingston	12.0	14.0	20.0	12.0
Manchester	34.0	31.0	34.0	13.0
Other rural	54.0	55.0	46.0	75.0

hostile to the company, though another 55 per cent expressed reservations or resentments about particular issues. High pay and steady employment, as compared with previous jobs, stood out clearly as the most common factors which evoked favourable sentiments, as did the attraction of working on modern equipment. Many of the workers who mentioned this latter factor felt that their Aljam jobs were improving their skills and broadening their experience.[59]

Negative attitudes toward employment at Aljam, in comparison with some previous jobs, were often expressed as criticisms of line supervision. A frequent complaint was that the foremen were too demanding, with a tendency to interpret too strictly working rules and performance standards, quick to blame workers for mistakes and violations of the rules but rarely or never to commend unusual performance. Another frequent complaint was the failure of foremen to respect the worker's personal dignity. "They treat us like children" and "they don't treat you like a man" were common expressions of this

[59]Some of these workers even mentioned adjustment to a tighter discipline and higher performance standard as beneficial in this respect.

complaint. Still another source of dissatisfaction was with the speed and fairness of promotions.

Generally, these different attitudes toward their jobs at Kirkvine Works were not strongly associated with worker characteristics suggestive of incomplete commitment to industrial work. Older workers were more often found in the group highly favourable to their Aljam jobs, while youth, short service, and secondary schooling were characteristics more commonly associated with a hostile attitude toward the company. Skilled workers, but also workers whose last job had been in agriculture, were, on balance, relatively favourable toward their present jobs, while workers who had come from sugar manufacturing tended to be slightly on the negative side. Various other characteristics, such as marital status or parish of birth, seemed to have no marked association with any particular job attitude.

Consumption Patterns

In a fully-developed money economy such as Jamaica, it seems hardly necessary to comment on workers' consumption patterns. The incentive for cash income is unquestionably strongly developed, though income-in-kind has some undetermined but probably minor importance in the rural sector.[60] Even so, it is possible that the pattern of expenditure may tell us something about the commitment to industrial work. In particular, if workers are spending income above that required for daily living needs on the purchase of agricultural land, stock, or equipment, it might be presumed that their commitment to industrial work is being hedged or, at least, is uncertain.

Little evidence of this kind was found among the sample hourly-paid work force at Alumina Jamaica. A little more than a fourth of the sample had made land purchases since they became employed at Kirkvine Works, but in nine out of ten of such cases the purchases were intended for residential use or as a speculative hedge against inflation. Present housing arrangements,[61] moreover, were generally divorced from agriculture; only a fifth of the sample were living in situations where commercial cultivation was carried on, and in about half of these instances the Aljam worker was not involved with farming operations.[62]

A little more than half of the sample work force had purchased various items of household furniture, and about an equal number had purchased radios. About 15 per cent had purchased automobiles, and 13 per cent had bought bicycles. Only 8 per cent had purchased either farm animals or farm-

[60]Department of Statistics, *Rural Household Expenditure Survey*, 1956. Kingston, mimeo, 1957.

[61]About 52 per cent of the sample owned their own homes, and 42 per cent were tenants or rented lodgings. This may be compared with an owner-occupancy rate of 77 per cent in the recent rural household expenditure survey (Department of Statistics, *Rural Household Expenditure Survey*, 1956, Kingston, mimeo, 157).

[62]These workers were usually living in the homes of parents or other relatives and were not heads of households.

ing equipment. Among workers who had made no extraordinary purchases since their employment in bauxite, the largest number hoped or intended to purchase a home or improve existing homes; about a fifth would like to buy real estate, usually as a form of saving, while about 12 per cent expected to save additional income for financing their own or their children's education.

Concluding Observations

As the analysis in the foregoing sections shows, a significant problem of labour commitment failed to materialize at the Kirkvine Works of Alumina Jamaica, Ltd. during the first five years of operations. Even in the initial years of operation, a work force mainly recruited from the local rural setting into a technologically-advanced modern enterprise did not exhibit rates and patterns of turnover, absenteeism, or discipline very different from those that would be generally expected among urban workers in industrially-advanced countries. Within the sample work force of this company, in fact, there is some evidence to suggest that instability was more likely among those workers from an urban and/or industrial background than among those recruited directly from traditional agriculture.

Any interpretation of results based on the experience of a single company must necessarily be speculative and involve a large degree of judgmental inference, even though the situation may appear well-suited to an investigation of the problem of labour commitment. Factors specific to the situation at Kirkvine Works unquestionably influenced the general outcome of the study, but forces of broader scope and significance in the Jamaican economy and society may have been more important. The latter, especially, cast strong doubt on the inevitability of a problem of labour commitment in underdeveloped societies.

In seeking for an explanation of the results of this study it is necessary to deal first with the contention that Alumina Jamaica had bid away the elite of the experienced industrial labour force in Jamaica. This is a plausible supposition, in view of the high wages and steady employment obtainable at Kirkvine Works, but the evidence collected in this study argues against it. For example, if the supposition were true, the distribution of the geographic origins of the sample work force should have been more heavily concentrated in the metropolitan area instead of rural and local. Sugar factories, which are the largest single employer of factory labour in the island, accounting for 30 per cent (in 1955) of registered factory employment,[63] contributed only a little more than 13 per cent of the workers in the sample work force or 15 per cent of those previously employed in non-farm jobs.[64] The only sense in which the proposition may be true is reflected in the disproportion-

[63]Ministry of Labour, *Annual Report of the Ministry of Labour, Jamaica, for the Year 1955*, The Government Printer, Kingston, 1957.

[64]See Table 3, above.

ately large numbers of workers who had had some secondary education or technical training, but these were largely the younger workers with relatively little previous industrial experience.

A related possibility explaining the stability of the work force is that the hiring and selection process, over time, had tended to weed out those workers most likely to exhibit various forms of instability. Undoubtedly, the decline in turnover rates and absenteeism is partly attributable to this factor, though we have no objective evidence by which to measure its significance. As a sufficient explanation, however, the effect of turnover and employee selection on stability must meet the objection that the proportions of those recruited from the metropolitan area, or of those with secondary education, were smaller in the sample of the work force employed in the spring of 1958 than among those who left Kirkvine Works during the previous five years.

Several factors of broader significance would seem to provide a more satisfactory explanation of the absence of a significant problem of labour commitment in this case. One of these is that the Jamaican worker is culturally receptive to employment in a modern industrial enterprise. Even though the tools of an advanced industrial economy do not exist to a large extent in Jamaica, especially in the rural sector, certain cultural barriers to industrialization also do not exist. Jamaica shares with the highly industrialized metropolitan power a common language, certain common traditions and history, and a similar style of life. Continuous contact throughout most of its history with Great Britain, as well as with North America, has undoubtedly kept Jamaica abreast of social and economic change in those countries, if not a full partner in the material advances.

A second, related factor is that contemporary Jamaica is not to the same extent as some other underdeveloped countries a so-called "dual society." Even in the rural sector, as Moore expresses it, economic activity is a "distinctive aspect of social life."[65] As indicated by the data on wage employment, a large portion of the work done is exchanged for cash income, rather than a matter of reciprocal obligation assuring the individual of security regardless of the state of the labour market. Thus, in this critical respect, the rural and industrial sectors in Jamaica share a common system of organization of production and exchange, which probably diminishes the difficulty of worker transfer from the former to the latter sector.

A third important consideration is that bauxite mining and alumina production were introduced into Jamaica at a time when significant social and economic changes were well under way. The establishment of universal suffrage in 1944, together with expanding opportunities in manufacturing and commerce since that time, have further broken down many of the ethnic barriers to social and occupational mobility and provided realizable incentives as well as opportunities for accepting industrial employment. In addition, of

[65] Wilbert E. Moore, *Industrialization and Labor*, Cornell University Press, Ithaca, New York, 1951.

course, the rapid shrinkage of opportunity in agriculture and the pressure of an expanding population and labour force have provided another stimulus to movement into the industrial labour force.

Fourth, the fact that bauxite mining and alumina production are capital-intensive may have contributed to labour force stability in several ways. The implied marginal product of labour would make it possible to pay relatively high wages and, thus, attract and retain a labour force of high quality. Labour-intensive methods of production, on the other hand, imply low-prestige manual work as well as low wages, and may therefore result in high turnover and absenteeism, especially in a country where manual labour has had a traditionally low social prestige. Moreover, as Hirschman points out,[66] capital-intensity, because the work is largely machine-paced, facilitates the training and performance of the work force.

Finally, it is tempting to speculate about the merit of the basic assumption with regard to the worker recruited from traditional agriculture. The gap between the earnings and employment possibilities in his new industrial employment and those open to him as a farmer or farm worker is usually wide, while, at the same time, his job horizon remains relatively narrow through lack of experience and mobility. It would not be surprising, therefore, if he chose to make intensive efforts to adjust himself to the demands of the more favourable industrial situation. For the experienced, urban-industrial worker, on the other hand, the range of known possibilities is wider and his expectations in terms of wages and employer-employee relations more sophisticated. In this study, at least, instability in the work force was more likely to be found in the latter group.

[66]Albert O. Hirschman, *The Strategy of Economic Development*, Yale University Press, New Haven, 1959.

The Imputation of Values to Intra-Company Exports

THE CASE OF BANANAS

By

Richard A. LaBarge[a]

I

In recent years economists interested in problems of applied trade and location theory have given increasing attention to the problem of obtaining significant values for export goods which are produced and shipped by direct investment subsidiaries of the importing firm. This problem has been particularly acute for the countries of Isthmian America where, prior to the second World War, a number of products (most important of which were bananas) were evaluated solely by means of values "declared" by their exporters.[1] No attempt had been made to determine the actual purchasing power accruing to these exporters from their operations. As a result in part of the consequent undervaluation, it is not uncommon even today to find in the trade figures published by Isthmian countries long series of unrevised, predominantly adverse balances on current account with no indication that deficits of such magnitude are to be explained by large capital imports of either a long or a short-term nature.

The valuation problem is important not only for determining the real value of the product f.o.b. the port of export, but also for allocating that revenue among the factors of production. If the real value of the product is unknown the profit residual remaining after cost deductions is likewise indeterminate. Now the capital employed by direct investment subsidiaries is not owned by nationals of the countries in which that capital is located. Hence, accurate knowledge of the profits accruing on this capital is essential if the social accountant is to transform estimates of value added to *national* products into estimates of value added to *domestic* products.[2]

This phase of the problem is illustrated by Figure 1. Here there are six zones of revenue, representing separately the costs and profits accruing on each of three separate operations: 1) total expenditures involved in placing a banana stem aboard ship at the port of export; 2) total expenditures involved in transporting that stem to the port of import; and 3) total expendi-

[a]The author wishes to express his appreciation to the Middle American Research Institute of Tulane University and to the Social Science Research Council for financial support of the field research which led to the writing of this article.

[1]It is worthy of note that the enterprises involved never have claimed that their declarations represented more than rule-of-thumb figures for internal accounting purposes.

[2]Terminology here follows the United Nations definitions of social accounting aggregates.

tures involved in handing the stem from ship to jobber at the port of import. Total delivered value (the price paid by the jobber) is known. The shaded zones (one, three and five) which represent cost outlays in each producing process also are known. By subtraction one can derive the *sum* of the unshaded profit zones (two, four, and six), but the problem is to allocate this total to the specific profit zones involved. Our interest centres on zone two —those profits accruing on operations performed within the exporting country — for only if one knows the portion of total profits which belong in zone two can one estimate values added by the producer to domestic product aggregates.

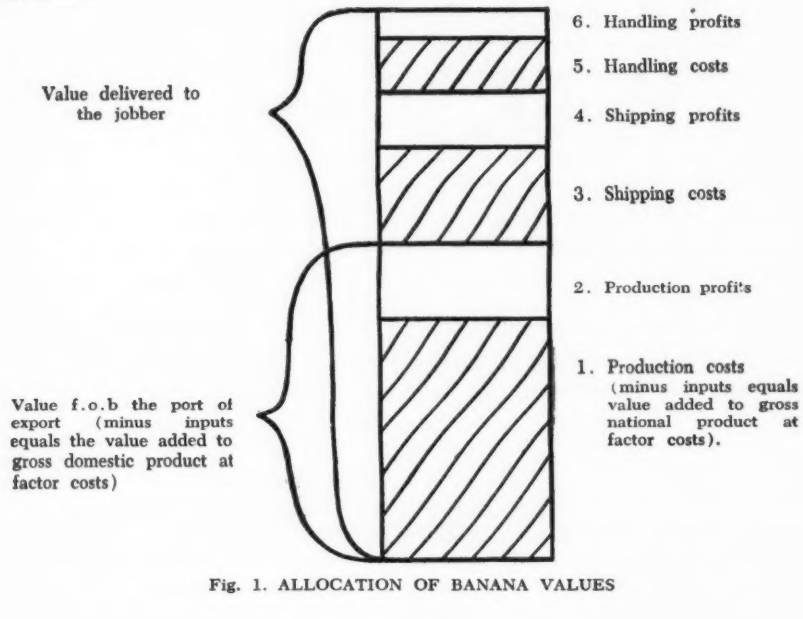
Value delivered to the jobber
Value f.o.b the port of export (minus inputs equals the value added to gross domestic product at factor costs)
6. Handling profits
5. Handling costs
4. Shipping profits
3. Shipping costs
2. Production profits
1. Production costs (minus inputs equals value added to gross national product at factor costs).

Fig. 1. ALLOCATION OF BANANA VALUES

II

Historically, the available literature indicates that four approaches have been made toward re-evaluation of banana exports from Isthmian America. The first approach, the results of which were published by the International Monetary Fund in 1948, involved simple adjustment to the payment balances for Costa Rica and Guatemala.[3] Use of these adjustments continued

[3] I.M.F., *Balance of Payments Yearbook* I, 1939, 1946-1947, pp. 126 (Costa Rica) and 208 (Guatemala). For Guatemala the following statement appears: "Banana exports by foreign-owned companies operating in Guatemala are included in published trade returns at the declared customs valuations. The adjustment for undervaluation is an estimated differential between the value declared by these companies and the market price." We are not informed further as to the nature of this differential in the Guatemalan case, but for Costa Rica the statement is made that calculations are based on New York wholesale prices per stem, less 15 per cent allowance for costs, insurance, and freight.

until 1950, when the I.M.F. adopted an imputation procedure devised by economists of the Banco de Guatemala. The revised adjustments resulting from this procedure were published in 1951.[4] However, the new estimates, with the Fund's prestige behind them, were embroiled almost immediately in Guatemalan politics, and a number of polemics, written in anything but professional vocabulary, appeared which attributed the entire amount of the Banco adjustment (always identified as an adjustment issued by the International Monetary Fund, "an agency of the United States" and "a scientifically responsible institution") to concealed receipts of the United Fruit Company and its subsidiary, the Compania Agricola de Guatemala. Together with a failure to deduct the cost of imported inputs, this procedure led these writers to the conclusion that these concerns were earning "exploitative" profits on their Guatemalan operations. Yet the customs figures compiled by the Banco de Guatemala (*Boletín del Banco de Guatemala*, año VII, 9 (setiembre de 1954), p. 55) indicated that these concerns together shipped an average of 72 per cent (ranging in given years from 61 to 89 per cent) of all banana stems exported from Guatemala during the period 1946-1953. Most of the remaining fruit was shipped by an independent firm, the Standard Fruit and Steamship Corporation, which followed "declared" valuation practices similar to United Fruit's. Thus, it unquestionably was erroneous to attribute the entire valuation adjustment to the gross revenues of the latter concern.[5]

The fourth edition of the *Balance of Payments Yearbook* reported use of the Banco method for adjustment of the Guatemalan balance only. For other Isthmian balances a third procedure was employed by which "declared" values were subtracted from a commercial f.o.b. value "certified by U.S. auditors" to obtain the required adjustment.[6] At this juncture accountants

[4]I.M.F., *Balance of Payments Yearbook* III, 1949-1950, pp. 216 (Guatemala) and 220 (Honduras). One may refer also to the then-current issues of *International Financial Statistics*. A more extensive exposition of the Banco methodology was presented by the Banco de Guatemala delegation to the Conference on Foreign Trade and Balance of Payments Statistics held December 3-15, 1951, in Panama City. This paper was published under the title "Ajuste del valor de las exportaciones de banano guatemalteco para fines de la balanza de pagos," *Boletín de la Dirección General de Estadística* (Guatemala), 35 (febrero de 1952), pp. 67-73.

[5]This misapplication has an interesting historiography. It first appeared on October 18, 1951, in a publication by Alfonso Bauer Paiz entitled "¡Hacia la independencia económica de la nacíon!" The reply headlined on the front page of Guatemala City's leading daily newspaper, was almost immediate: William L. Taillon, "La Frutera no ha explotado al país, Explica con datos," *El Imparcial*, 9 de noviembre de 1951, pp. 1-2. There never has been any attempt at rejoinder to Taillon's article. Instead, the same mistake has been repeated by its originator and by other writers. See Alfonso Bauer Paiz, "¡Hacia la independencia económica de la nación! Llamamiento y denuncia del F.P.L. [Frente Popular Liberatador] frente a la amenaza de la United Fruit Company," reprinted without significant change in *Suplemento Semanal de El Mes Económico y Financiero* (Guatemala) II, 8 (29 de noviembre de 1951), pp. 59-63; Marco Antonio Ramírez, "La capacidad económica de la United Fruit Company y las demandas de la 'Unión Sindical de Trabajadores de Puerto Barrios,'" *El Mes Económico y Financiero* (Guatemala) V, 1 (enero de 1952), pp. 1-4; Luis Cardoza y Aragón, *La Revolución Guatemalteca* (México: Cuadernos Americanos, 1955), pp. 25-31; and Guillermo Toriello, *La Batalla de Guatemala* (México: Guadernos Americanos, 1955), p. 39.

[6]I.M.F., *Balance of Payments Yearbook* IV, 1950-1951, pp. 80-81 (Costa Rica) and 138 (Guatemala).

for the United Fruit Company suggested that the I.M.F. could impute the necessary adjustments to Isthmian payment balances through modification of a formula then being employed for the purpose of determining the amount of total receipts from banana operations subject to domestic taxation in the United States. After extended discussions the Fund accepted this procedure, and it has been used since to revalue banana exports appearing in all Isthmian payment balances since the end of the second World War.[7]

III

The number of theoretical issues raised by methods of adjustment thus far applied may best be examined with reference to the basic formula:

$$V = q \cdot \bar{p} \qquad (1)$$

where V represents total value, q represents total quantity exported, and $\bar{p}$ represents an average market price at the port of export. Since q (either in pounds, in kilograms, or in numbers of stems for which an average weight can be computed) is given in export figures while $\bar{p}$ is not available, the main problem is to determine V by finding a suitable value for $\bar{p}$.

The equivalent for $\bar{p}$ formulated by economists of the Banco de Guatemala involved the deduction of transportation charges per stem from an average wholesale price in the United States. Their procedure may be expressed by the formula (notation mine):[8]

$$\underset{A}{V}^{a} = \underset{A}{q}^{a} \cdot (\bar{p}^{a} - \underset{A}{\bar{t}}^{a}) \qquad (2)$$

Here $\underset{A}{V}^{a}$ represents the total f.o.b. value of product at A being embarked for a; q represents the total quantity of product at A being embarked for a; $\underset{A}{\bar{p}}^{a}$ represents the weighted arithmetic average of wholesale prices prevailing in a for product received from A; and $\underset{A}{\bar{t}}^{a}$ represents the weighted arithmetic average of all insurance freight, loading, and unloading costs (together with an allowance for normal profit) required to transport the product from A to the market in a.[9] When applied to the Guatemalan payment balance, a was

[7] I.M.F., *Balance of Payments Yearbook* V, 1947-1953, pp. 2 (Costa Rica and Honduras) and 3 (Guatemala). The new series of revisions has appeared in all issues of *International Financial Statistics* since that of August, 1955.

[8] Based on the chart given in "Ajuste del valor . . . ," *op. cit.*, p. 72.

[9] The Banco application specifies that these costs include those incurred in loading each stem aboard the train at a for shipment to interior points. *Loc. cit.*

identified as New Orleans except in the term $\overline{t}^{a}_{A}$, where a represented Miami. This procedure was justified on the ground that transport costs of certain independent producers exporting to the Miami market represent a fair opportunity cost for the large concerns (United Fruit and Standard Fruit) who ship in their own vessels over a similar distance to reach the New Orleans market.[10] A was uniformly identified as Puerto Barrios, Guatemala's only deep water port.

The Banco methodology has been questioned by United Fruit Company statisticians for imputing the total of wholesale banana profits to operations in the producing countries.[11] However, close examination of the formula reveals that such is not the result, since a deduction for normal profits accruing on all transport, unloading, and risk-bearing operations is included with the deduction of $\overline{t}^{a}_{A}$. Unless above normal profits also accrue on these operations, the remaining profits must therefore accrue within the producing country and contribute to the credit of its international payment balance. Hence, on this particular question United Fruit's position is not well founded; it results from a misunderstanding of procedure involved in the use of opportunity cost as a method of estimation. By contrast, one observes that the Banco formula, properly generalized, would relate the producer to the market for which he produces by taking into account the transportation cost barrier which his particular location imposes upon him. The substitute for $\bar{p}$ thus derived represents the no-profit margin per stem for anyone purchasing bananas at A for delivery and wholesale in a.[12]

Nevertheless, it should be noted that the Banco formula is not perfect. Its use of the opportunity cost theory assumes that the next best alternative turned down is of a value adjacent to that of the choice accepted. The market equilibria involved must have some semblance of continuity. Surely it would not do to value the salary of a $20,000 manager at $5,000 simply because the market for this man's services was discontinuous and his best rejected alternative was a position elsewhere at $5,000. It is one matter to state that the cost of accepting the $20,000 job was foregoing the $5,000 job, but quite

[10] *Ibid.*, p. 71.

[11] Louis S. Sisto to Joseph W. Montgomery, 21 February, 1955. The statement reads: "Briefly, it [the Banco procedure] amounted to nothing more or less than the sale price in the United States adjusted downward by an estimated amount for ocean freight and handling. The effect of this procedure quite obviously imputes to the country of origin the entire profit, which is wholly incorrect."

[12] Of course, actual purchasing operations would be undertaken at A only if an open market exists and if the prevailing market price were lower than the no-profit margin by an amount sufficient to bid the capital required for purchasing operations away from other enterprises of like risk and uncertainty. Economists will recognize this as the normal profit allowance, here included among costs as the payment for capital factors.

another to proceed from this statement to one which, in effect, says, \$20,000 — \$5,000. In the case of banana shipping, differences between the quality of service rendered by vessels of the large banana companies and the quality rendered by vessels of the independents suggest that the former may cost considerably more than the latter. If this is the case one would expect the Banco formula to understate the shipping expenses of the large producers, thus overvaluing bananas at all ports of export.

The equivalent for $\bar{p}$ provided by the formula presently used by the I.M.F. is a price per stem composed of production costs plus an arbitrary allowance for profit. This price is a constant, used for all countries for which imputation is required. One may express the complete formula as follows (notation mine):[13]

$$\sum_{a}^{z}\sum_{A}^{Z} V_{i_J} = \sum_{a}^{z}\left[\sum_{A}^{Z} q_{i_J} \cdot \left(\frac{C + .5P}{Q}\right)_i\right], \qquad (3)$$

$$i = a, \ldots, z$$
$$J = A, \ldots, Z$$

Here $\sum_{a}^{z}\sum_{A}^{Z} V_{i_J}$ represents the total value of product exported by any firm, i, from any port, J summed over the number of exporters, a through z, and over the number of ports of export, A through Z. $\sum_{A}^{Z} q_{i_J}$ represents the total quantity of product exported by any firm, i, from all ports of export, A through Z. The numerator of the term $\left(\frac{C + .5P}{Q}\right)_i$ represents total production costs plus an arbitrary assignment of one-half the total profits on foreign sales resulting from the producing operations of any firm, i, in all countries. The sum of these values is divided by the total quantity of product exported from these countries to derive a constant average price. The operation indicated by $\sum_{a}^{z}$ then is performed from balance of payments data supplied yearly by each of the firms, a through z, involved.

The properties of this formula are precisely those one should avoid in a formula for constructing estimates of gross revenue for balance of pay-

[13]The notation is derived from the following literary explanation, quoted from an I.M.F. report by Mr. Louis S. Sisto: "The value of banana exports is derived by multiplying the quantity shipped by a unit export value which is uniform for all countries in any given year. It is derived by adding to the total cost of production of bananas in all countries 50 per cent of the total profit of the Company on all foreign sales, and by dividing the latter amount by the total quantity of bananas exported from all countries." Louis S. Sisto to Joseph W. Montgomery, 17 August, 1955. The author has not seen the original report.

ments purposes. Other things being equal, comparative advantage in the production and sale of any given commodity is inversely related to the costs which must be defrayed to overcome transport barriers in sending that commodity to market. These barriers differ with differences in location. Any unit price, constant despite location, ignores these differences and therefore is unsuited to the estimation of gross revenues for crediting international balances.

IV

Comparative results achieved through use of the Banco and I. M. F. formulae in revaluing banana exports are available only for the limited number of years and for the countries shown in Table 1. A simple analysis of variance has been applied to these series in order to determine for each of three countries whether the mean value of the Banco series differs significantly from the mean value of the Fund series. Although annual differences in these adjustment estimates often amounted to several millions of dollars, there clearly is no significant difference between columns at the

TABLE 1. ANALYSIS OF VARIANCE IN BANCO AND FUND ADJUSTMENTS TO DECLARED VALUES OF BANANAS F.O.B. EXPORTING COUNTRIES, 1947-1953.
(millions of United States dollars)

Year	Costa Rica		Guatemala		Honduras	
	Banco Series a	Fund Series d	Banco Series a	Fund Series d	Banco Series a	Fund Series d
1947	$ 8.0	$11.8	$12.8	$16.0	n.a.	n.a.
1948	14.1	18.5	17.1	19.0	$30.2	$33.1
1949	16.8	22.0	11.0	10.2	37.5	33.3
1950	n.a.	----	11.3b	11.1	34.6	34.3
1951	n.a.	----	n.a.	6.4	n.a.	----
1952	n.a.	----	7.3c	1.3	n.a.	----
F	1.268		0.147		0.061	
Fc.05	7.709		5.117		7.709	

n.a. indicates a figure not available.
---- indicates a figure available but not used in the analysis.
a I.M.F., *Balance of Payments Yearbook* III, 1949-1950, pp. 131 (Costa Rica), 216 (Guatemala), and 220 (Honduras), except where otherwise noted.
b I.M.F., *Balance of Payments Yearbook* IV, 1950-1951, p. 138 (Guatemala).
c Banco de Guatemala, Departamento de Estudios Económicos, *Balanza de pagos internacionales de Guatemala*, 1952, p. 11, and 1953, p. 11. The adjustment was computed by subtracting the declared value cited in the 1952 issue from the revised estimate cited in the 1953 issue.
d I.M.F., *Balance of Payments Yearbook* V, 1947-1953, pp. 2 (Costa Rica and Honduras) and 3 (Guatemala). See also *International Financial Statistics* (Washington) IX, 8 (August, 1956), p. 121 (Honduras).

5 per cent level for any of the countries tested. On a basis of chance selection these findings indicate that one series of estimates was quite as reliable as the other during the period covered.

However, this conclusion is subject to two qualifications. First, the lack of long series severely restricted the number of degrees of freedom, thus

broadening the respective ranges covered by one standard error of estimate. Hence, there is some question whether insignificant differences would persist if banana estimates from both formulae were available over a longer period of time. Secondly, one should remember that the role of theory is to improve upon the results of chance analysis, a role especially important when standard errors are large. Whenever there is no significant difference between two series, the more acceptable of the two is the one best supported by pure theory.

It is of interest that for Costa Rica all of the adjustments imputed with the Fund formula exceed those estimated with the Banco formula, even though the differences are not statistically significant. Like phenomena are not observed for the Guatemalan and Honduran series. There is a reason for this observation. The majority of banana stems shipped from Costa Rica since the close of the second World War have been shipped from two Pacific Coast ports, Golfito and Quepos. At the time (1947-1949) these shipments were faced with a relatively long haul, more costly than the average, either up the Pacific Coast to ports in the Western United States or through the toll-bearing Panama Canal to ports in the South and East. Hence, one would have expected the value of bananas f.o.b. Costa Rica to be less than that imputed using the average price per stem employed in the Fund formula. With the post-1950 appearance of Ecuador as a leading banana producer, average hauls have lengthened so that this observation may no longer be as appropriate as it was before 1950.

V

To be acceptable theoretically for balance of payments purposes, export values must be imputed with procedures founded on location analysis. The Banco formula for evaluating bananas represented such procedures, although its method assumed adjacent, reasonably continuous market equilibria and made no allowance for the possible accrual of quality returns or above normal profits on shipping operations. Where these assumptions are justified, the Banco formula may be generalized as follows:

$$\sum_{a}^{z}\sum_{A-a}^{Z-\Omega} V_{J_i} = \sum_{a}^{z}\sum_{A-a}^{Z-\Omega}\left[\begin{matrix} k \\ q \\ J \end{matrix} \cdot (\overline{p}_k - \overline{t}) \begin{matrix} k \\ \\ J \end{matrix}\right] i, \qquad (4)$$

$$i = a, \ldots, z$$
$$J = A, \ldots, Z$$
$$k = a, \ldots, \Omega$$

Here $\sum_{a}^{z}\sum_{A-a}^{Z-\Omega} V_{J_i}$ represents the total value of product shipped by any firm, i, from any port of export, J, to any market, k, summed over all trade routes,

A—α through Z—Ω, and over all exporting firms, a through z. $\overline{q}^{k}_{J}$ indicates total quantities exported from any port, J, to any market, k . $\overline{p}_{k}$ represents the weighted arithmetic average of wholesale prices prevailing in any market, k . $\overline{t}^{k}_{J}$ represents the weighted arithmetic average of all transport, unloading, and insurance costs between any J and any k (including allowance for a normal profit on these operations). The term i appended to the brackets indicates that the whole expression refers to the operations of any firm, i. Summations necessary to arrive at the total value of product exported from the country are indicated by the prefixed sigmas.

This formula could be employed without the defects encountered in the use of the opportunity cost approach. Both the United Fruit Company and the Standard Fruit and Steamship Corporation charter a number of vessels, many of them refrigerated for the banana trade, and the rentals paid for the services of these vessels include costs plus a normal profit for the voyages involved. Thus, to derive a value for $\overline{t}^{k}_{J}$ it would be necessary only to multiply the average daily rental paid for the given type of shipping by the average number of days required to make the voyage in question, dividing this total by the quantity of product shipped.

One must re-emphasize that undervaluation via "declared" values is a general problem and that the theoretical issues discussed in this article are not restricted to banana valuation. Within the Isthmian region alone undervaluation has affected trade data for other important items such as abacá, cacao, and shrimp. For all such products the problem stems from a discrepancy between the declared and real values of the export in question. For all such products the solution depends on imputing home values related through barriers of transport cost to the markets in which the produce actually is sold. Hence, the literature concerning banana valuation is relevant for the valuation of other products as well, and the generalized Banco formula may be viewed as a theoretical solution to the undervaluation problem as a whole.

The Household In Kenscoff, Haiti

By

S. Comhaire-Sylvain

The Choosing of the Sample

The Commune of Kenscoff is an administrative division (100 square miles, 15,000 inhabitants) of the Republic of Haiti. Its main settlement and administrative centre, the "*bourg* of Kenscoff" or "Kenscoff town", or in the language of the peasants, the "*buk*" (cf. "*mbuka*", village, in the Kikongo language of the Lower Congo from which came a large part of the ancestors of the actual settlers) is located in the mountains, south-west of Port-au-Prince at about forty-five minutes distance by car.

In 1956, the husband of the writer, M. Jean Comhaire, was given a one-year grant by the Institute for the Study of Man in the Tropics from Columbia University (U.S.A.) to evaluate cultural change in the Commune of Kenscoff where he had carried out his first anthropological field work in 1937-39. In both cases he was accompanied by the writer. Moreover, both had made many shorter trips to the region during the twenty-year interval and had not lost contact with the inhabitants.

Not only the heads, but most of the members of the various households contained in the *bourg* sample were personally known to the writer, some of whom even used to peddle fruits and vegetables to her mother's house in Port-au-Prince during the last thirty years. All plots of land inhabited by peasants were systematically canvassed during the last year of field work (1956-57) and only a few families temporarily absent escaped investigation. A score or so of families of "city people" who came to the *bourg* for commercial or administrative reasons were not included in the sample.

In the case of the small neighbouring communities, the sample comprises only the households nearest to the *bourg*. As regards the region of Furcy – higher up in the mountains – where the writer went regularly from the *bourg*, she had not the same personal relations with all the household heads of the sample, but on the other hand information was easier to obtain because the old *laku* system (which will be described below) still prevails.

Field work

Naturally the study of the household and family structure was only a small part of our work, which purposed to survey all phases of peasant life and to study how it had been affected during the last twenty years by economic change and cultural contacts brought about by the opening of a motor road between Port-au-Prince and the *bourg* in 1932. We had done

similar work in 1948 during the Preliminary Survey organized by UNESCO under Prof. Métraux for the Pilot Project of Basic Education in the Marbial Valley, and found another type of Haitian peasant community. We hope that other research workers will carry out similar studies in Northern and Southern regions which are reputed to be as different as Marbial is from Kenscoff, so as to compare results before presenting our conclusions as to cultural change under the influence of Church, State, improved economic conditions fighting against the traditional African family structure and customs and the old Voodoo religion.

Position of the "Bourg" of Kenscoff in Relation to Purely Urban and Purely Rural Communities

Since the opening of the motor road in 1932 and the establishment of the *bourg* as the centre of an administrative district (commune) in 1934, it has become a summer resort on account of its climate (maximum temperature around 79°F and minimum 52°F from July to September) and of its proximity to Port-au-Prince. The tourist who visits the place at that time sees only the crowded hotels, the streets full of well dressed people and luxurious cars, the beautiful villas and gardens. He may then speak of a small town. He will have no idea that the crafty peasant has sold only that part of his property bordering the road to the "stranger", with whom he has only very casual contacts – even the servants are usually imported – and that behind the modern houses and the small stores that cater for their guests, native life still carries on.

From the 15th of September (first rains) to the 1st of October, the exodus of the "city people" sets in and the *bourg* becomes a ghost town as regards urban life for the next nine months.

The *bourg* of Kenscoff is surrounded by purely rural communities. Furcy and its neighbourhood are also rural, despite a few summer vacationists who prefer Furcy to "Kenscoff" because it is colder and drier, and much less crowded and sophisticated.

Shorter History of the Region

Up to the Haitian Revolution (1793-1804), during the French colonial period, the region that forms now the Commune of Kenscoff was neither very rich nor very populated. The big sugar planters occupied the plains, and we know by the list of the indemnities that the Haitian Government had to pay to the former settlers for the destruction of their property and the value of their land – list established by the French Government – that Messieurs Robin de Kenscoff, Lefébure de Fourcy (Furcy), de la Mardelle and so on, had relatively small estates, with few installations and not very many slaves.

These slaves came for the most part from the Lower Congo region of Africa. Some of them may have originated in the Upper Congo and been sold in the Lower, as witnessed by some typical huts found in 1937 in a small

community near Furcy still called Nan Congo at the time. Many had been newly imported and were very proud of their African birth. One still finds on some graves of the lineage cemeteries: "So-and-So, African, born on such a date, dead on such a date".

They opposed unsuccessfully the Haitian-born leaders of the Revolution who were of West African descent, mostly Dahomeyans, but after having made their peace with the authorities, some of the ancestors of the actual inhabitants obtained regular titles to land through State grants, while a few large properties were purchased from the State by non-peasants, and the remainder, or most of the remainder of the land, was farmed to former slaves for a nominal price. The descendants of these farmers now consider themselves as owners – on account, perhaps, of more than one hundred years occupation, and non-payment of rent.

For a period covering more than half a century the region was quite prosperous: the mulatto son of M. de Kenscoff had re-purchased his father's estate – that estate where the Jamaican Richard Hill met his wife when he visited the country in 1830. Grants of land had been large enough (60 to 90 acres) to permit farming on an economic basis, but the seed of trouble was already sown in absentee ownership in the case of the larger plantations, which were divided amongst share-croppers who rarely met their obligations. They had generally small plots of their own and on the death of an owner – if the heirs decided to part with a property which was only a source of litigation – they were the only possible purchasers, because educated people with capital to invest had lost interest in the region on account of the deterioration of roads and difficulty of economic and social contacts.

The price offered became smaller and smaller, but it was always finally accepted. Thus, a kind of rural illiterate aristocracy slowly came into being, composed of relatively large peasant owners whose lineages have ruled the region in spite of all the changes of government in Port-au-Prince. The economic decline was steady up to 1920, with the decrease in coffee production, increasing deforestation and subsequent erosion of the soil.

Then there was a pause due to political stability, and growth was resumed where good roads were built and maintained and terracing established to fight the erosion, that is to say in the *bourg* and in some of the communities in its vicinity. Re-forestation measures have been less successful than terracing, perhaps because the vegetable gardens so popular among the peasants (on account of the fact that their produce can be easily marketed by truck to Port-au-Prince) do not need any shade trees.

The more remote communities have been either static or declining during the last few years on account of periodic hurricanes (Nouvelle-Tourraine) and landslides (Bongars).

Law and Custom

Before defining the household, let us say a few words about two conflicts of law and custom concerning marriage.

The peasants have a rather stable form of union recognized by custom which they call *"plasaj"*. It is polygamic in nature although many men have been "placed" their whole life to only one wife. This union is ignored by the law which assimilates it to the concubinage which exists in town, thus giving no rights to the *plasé* wife.

In Haiti, priests and clergymen may marry legally two people in the communities where there is no administrative officer, and send a copy of the certificate to the nearest registry, because it is understood that legal marriage should always precede religious marriage. However, death-bed marriages are not recognized by the law, while they are regularly performed by the Church. Thus, as we have two kinds of wives among the peasants — the *plasé* and the legal ones — we have three categories of widows: the *plasé*, the religious and the legal ones. We shall see in this article how the conflicts have been resolved at the most crucial moment — inheritance — and in most cases to the advantage of custom which has still a big ally in public opinion, even in the more westernized *bourg*.

Household and Laku

We understand here by household a body of persons related by blood (or maybe not) who usually share the same cooking arrangements and live in the same house. When a grown-up daughter comes back to her parents' home through separation after some years of *plasaj*, she may prefer to have separate cooking facilities. If she does, as is often the case in the *bourg* for example but not in Furcy, it is a separate household; she is considered by her parents and siblings as an independent person who has been offered a temporary shelter. If she consents to cook with or for her mother, as is the rule in some communities outside the *bourg*, she falls back under parental authority and she is only an additional member of her parents' household.

When a grown-up man builds his own house on his father's plot before entering into *plasaj*, or when a father builds a house for his grown-up sons who are considered too young to get married but old enough to get a little more independence, the mother may still prepare their meals, which she will send them by messenger. But this is a separate household: parents' and siblings view the daily gift of food as a temporary help to independent persons.

In former times, throughout the Commune of Kenscoff, the household was only a part of a larger grouping constituted by the *laku* (literally: backyard) or compound. The head of the *laku* was generally the father, the eldest brother, or the uncle (paternal uncle, or exceptionally maternal) of the heads of the individual households. He owned — individually or col-

lectively – the land on which the houses of the *laku* were built. He also owned a number of fields, some of which he might give to the household heads to cultivate. His advice was sought on all matters concerning the various members of the *laku* and his decisions were final, as regards marriage, for example.

When the head of a *laku* died, if he was the father of the other household chiefs, they inherited, together with their sisters living in the *laku* or in their husbands' *laku*, the land and buildings that had not been given away by the father in his lifetime, but it was the eldest son who became the head of the *laku*, and apportioned the land kept to the end by him, each child retaining the field on which he used to work. We have been told in Port-au-Prince by a lawyer whose family had been for many generations in contact with the peasants of the region of Furcy, that the head of a *laku* would make use of every possible trick (fictitious sales, donations, etc.) to increase the inheritance of his eldest son and, through economic power, his authority.

The daughters of the family left the *laku* to get married, and did not come back except in case of separation, which was very rare. They owned the fields collectively with their brothers and always claimed their part in case of sale, but never at harvest time, although informants agree that they had the right to do so.

After the death of the head of a *laku* who was the eldest brother of the household chiefs, the next in age of his brothers living in the *laku* would become its head. A *laku* did not grow indefinitely; one of our informants said that the biggest ones did not have more than sixteen to eighteen dwellings. If the household chiefs had more than one wife and each wife more than one son, they would soon feel crowded, and one of them more enterprising than the others would acquire a plot of land and move there his family, huts and belongings, to found a new *laku*.

Nowadays, there are still a number of *laku*, beside individual dwellings, in many communities (the *bourg* of Kenscoff excepted); more, there are whole areas where people still prefer, as they say, *rete nâ latal-yo pase châje ganizô* (lit.: to stay in their birthplace rather than changing "garrison"). For example, from Consolé to the Furcy road above Lachèvre, clusters of more than ten houses are frequent.

In the *laku* closer to the *bourg* which we visited in 1937, the head was often at the same time the founder. When he died the *laku* ceased to exist socially and in some cases physically. For example, *Laku Orvil*, in Viard, was destroyed when the old man died in the nineteen forties, only two houses out of eighty being kept after sons and daughters had moved away. They did not accept their father's will and the property was divided after a lawsuit which impoverished them all. If paternal authority is still strong – especially in remote communities – it seems that people have become more independent than formerly towards other relatives. The biggest *laku*

close to Kenscoff *bourg* in 1957 was that of Chéristil Chéry in Corail which had seventeen houses.

One may find in the *bourg* and in some of the more "advanced" communities a modern version of the *laku*: clusters of houses belonging to the same family (father and children, mother and children, brothers and sisters) and built on a property originally owned by the father or by the mother, but people do not refer to them as *Laku So-and-So* (perhaps on account of the relatively small number of dwellings — usually three or four, rarely more: then three of the seven houses of Mme. Paul are rented to strangers, and one of the seven houses of Mme. Dèche likewise. Also the dependence of the grown-up children towards their parents is less rigid than in the old *laku*).

Composition of the Household

We have divided the various households into five types. The first one, by far the most frequently met with, includes the nuclear families — father, mother and children — whether the father and mother are legally married or not. In a few cases there are in addition one or more children of the father by another woman or of the mother by another man.

The second type includes nuclear families to which have been added one or both parents of the wife or of the husband, or siblings of either, or one or more grandchildren.

The third type comprises couples without children, whether because they have not yet started a family, or because the couple is sterile, or because their children live elsewhere. They may have one or more grandchildren or other young relatives living with them, or, if they are young themselves, one or more younger siblings.

The fourth type includes the families in which either the father or the mother lives mostly elsewhere. They are not broken homes. The children of a *plasé* wife, even when they do not live in their father's compound are likely to see him every day. He may take a meal with them in their mother's house every other day; he has his place among them. The children of a Furcy man working in Kenscoff *bourg* may see their father two days a week. Households of this type may comprise in addition one grand-parent, uncles and aunts, children of a sibling.

The fifth type includes basically broken homes and incomplete families: widows and widowers, separated people, with or without children, young men who are just starting out in life, *plasé* wives without children. Some young people may live with comrades of their own age or with siblings of the same sex, while older people will prefer grandchildren as companions. Servants may be found in households of any type.

The frequency with which we have met these different types of households in our inquiry is given in Table 1. Since we lived in the *bourg* for one year in 1956-57, we were able to make our house-to-house survey at the

time when no vacationist was present and to correct our mistakes on the spot. Our findings for the neighbouring communities and for the region of Furcy, where we went quite often, are also probably accurate: although they do not cover all cases, we believe the sample to be representative enough. In any event, the results agree with the statements of our informants.

TABLE 1. COMPOSITION OF THE HOUSEHOLD

Locality	Type I		Type II		Type III		Type IV		Type V		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Kenscoff	222	47.4	27	5.8	48	10.2	49	10.5	122	26.1	468
Neighbouring Communities	123	62.1	17	8.6	11	5.6	23	11.6	24	12.1	198
Region of Furcy	185	73.7	19	7.6	12	4.8	16	6.3	19	7.6	251
Total	530	57.8	63	6.9	71	7.7	88	9.6	165	18.0	917

Households of the first type may be broken down as follows:

	Kenscoff	Neighbouring Communities	Furcy	Total
Nuclear families alone	205	118	176	499
" " plus servants	2	—	2	4
" " and father's children	2	1	2	5
" " and father's children plus servants	1	—	1	2
" " and mother's children	1	1	—	2
" " , children of both, adopted children, plus servants	1	—	1	2
" " plus boarded children	1	—	—	1
Childless couple with man's children	3	2	2	7
" " with man's children and servants	1	—	—	1
" " with woman's children	4	—	—	4
" " with woman's children, niece, employees and servants	1	—	—	1
" " with adopted children	—	1	1	2
Total	222	123	185	530

Households of the second type may also be broken down into:

	Kenscoff	Neighbouring Communities	Furcy	Total
Nuclear families plus father's relatives:	11	5	6	20
Father's mother	3	1	2	6
" " and siblings	—	—	1	1
" " , children and aunt	1	—	—	1
Father's siblings	2	1	—	3
Father's siblings nuclear family plus servants	1	—	—	1
" nephews	2	—	—	2
" " plus servants	1	—	—	1
" " and their children	—	—	1	1
Father's *commère*	—	—	1	1
" parents	1	1	1	3
Nuclear families plus mother's relatives:	18	8	3	19
Mother's mother	6	5	—	11
" " , siblings and nephews	—	—	1	1
" siblings	2	2	—	4
" " and servants	—	—	1	1
" parents	—	1	—	1
" " and siblings	—	—	1	1

[Over

(*Cont'd.*)

Nuclear families plus relatives on both sides:	2		1		2		5	
Mother's children and father's mother		1		—		—		1
" " and distant relatives, mother's siblings		—		—		1		1
" " and mother's siblings		—		—		1		1
Mother's parents and mother's siblings		—		1		—		1
" " , father's children and nephews		1		—		—		1
Nuclear families and descendants:	5		5		7		17	
Grandchildren		2		3		4		9
" plus servants		1		—		—		1
" and great-grandchild		—		1		—		1
" and father's children		1		—		1		2
" , father's nephews and cousins		—		—		1		1
One child's nuclear family		1		—		1		2
Daughter-in-law and her children by son		—		1		—		1
Childless couple, plus man's child and man's mother		1		—		—		1
" " plus woman's child, man's mother, sister and nephews		—		—		1		1
Total		27		17		19		63

Households of the third type include:

	Kenscoff	Neighbouring Communities	Furcy	Total
Childless couples living alone	27	8	6	41
" " and servants	3	—	—	3
" " plus man's apprentice	1	—	—	1
" " plus man's siblings	1	—	—	1
" " plus man's nephews	1	1	—	2
" " plus woman's siblings	—	—	1	1
" " , man's children living elsewhere	4	1	—	5
Couples whose children live elsewhere	7	1	1	9
Couples whose children live elsewhere plus servant	1	—	—	1
Couples with grandchildren	2	—	4	6
Couples with grandchildren, plus servants	1	—	—	1
Total	48	11	12	71

It should be noted that some of the childless couples were not definitely sterile since they had been together for less than five years. Two at least of the Kenscoff women and four of the Furcy women were certainly pregnant. Three of the Kenscoff couples had all their children studying in Pétionville or in Port-au-Prince; the other couples separated from all their children (in the three areas) were people who already had married or *plasé* sons and daughters but were not old enough to require somebody to keep them company or take care of them.

Spinsters and Bachelors

It should be pointed out that in spite of the relatively large number of single women in the *bourg* there are no old maids and we have not heard of any in the neighbouring communities visited, while we found two in the region of Furcy (who are more fully Christianized). Both were very religious people, not so attractive, however, as those we met on the other side

Households of the fourth type (one of the spouses not in the house) may be broken down as follows:

	Kenscoff	Neighbouring Communities	Furcy	Total
Mother and children (father working in another community or in town)	3	2	5	10
Mother with children of two fathers, plus her parents (second father working in town)	—	—	1	1
Father and children, plus his parents (mother working in town)	—	—	1	1
Mother and children, plus mother's mother (father in another house)	1	—	—	1
Father or stepfather living with another wife but having full authority over the children of a household which includes:				
Mother and children	33	18	9	60
" " of two fathers	3	—	—	3
" " of another father only	3	—	—	3
" " , plus mother's mother	3	1	—	4
" " , plus mother's siblings	2	—	—	2
" " , plus servant	1	—	—	1
" " , plus grand-children	—	2	—	2
Total	49	23	16	88

Households of the fifth type (broken homes and single people) include:

Father dead or separated from mother:	37	10	11	58			
Mother and children		29	8	6		43	
" " , plus grand-children		5	1	2		8	
" " , plus stepchildren		1	—	—		1	
" " , grand-children, niece mother's mother		1	—	—		1	
" " , plus nephews		—	—	1		1	
" " , plus mother's mother		1	—	1		2	
" " , plus mother's parents		—	—	1		1	
" " , mother's sister and her children		—	1	—		1	
Childless *placé* wives:	18	2	2	22			
Living alone		17	1	1		19	
With stepchildren		1	—	—		1	
With sisters		—	—	1		1	
With nephews		—	1	—		1	
Single men:	34	5	4	43			
Living alone		24	3	4		31	
With servants		4	—	—		4	
With mother		—	1	—		1	
With sister and cousin		1	—	—		1	
With friends of same sex		1	—	—		1	
With grand-children		4	1	—		5	
Single women:	32	5	2	39			
Living alone		13	4	—		17	
With grand-children		11	1	2		14	
With grand-children and friend		1	—	—		1	
With mother		1	—	—		1	
" " and brother, plus servant		1	—	—		1	
With sister		1	—	—		1	
" " , plus servant		1	—	—		1	
With niece and female friend		1	—	—		1	
With friends of the same sex		2	—	—		2	
Mother dead or separated:	1	2	—	3			
Father and children		—	2	—		2	
Father and children, plus grand-children		1	—	—		1	
Total		122	24	19		165	

of the La Selle range in the Marbial valley who were more refined than most of their contemporaries.

Relatives and friends in Furcy had a healthy feeling about their spinsters, neither praising them unduly nor abusing them without reason (in Marbial they were considered as "saints on earth"). Kenscoff girls who have no money to tempt ambitious suitors may wait till they are thirty in the hope of a good catch, then under family pressure they will get married or "placed" to somebody they would not have taken otherwise.

There are three old bachelors in the *bourg* of Kenscoff and we know two more in the vicinity, all of them poor and ridiculed by young and old alike. We saw two in the region of Furcy, people said they were difficult to please, and found fault with every woman. It was hoped however that they might change their minds, and nobody would dream of abusing them on account of their celibacy. Bachelors and old maids usually live with their parents or with a sibling when the parents are dead.

In Kenscoff *bourg* and in the neighbouring communities a number of men under thirty do not find any wife among the girls of the place since so many are already taken as second wives by older men. Some of them try their luck elsewhere, while others wait for younger girls to grow up, and in the meantime visit prostitutes more or less regularly or engage in short-term affairs.

Old People Living in Their Children's Homes

It should be noted that no single man or widower went to live in one of his children's households though there were a few couples living in their children's homes (son-in-law as household head – one in each region – son as head – one in Kenscoff, two in each of the other regions; daughter as head – two in Furcy). It was explained to us that such a thing was certainly contrary to custom and although it had lasted for more than two years in all cases and might well last till the death of some of the older folk it was considered as temporary by all the people involved.

One example at least went to support that statement. Not far from the place where we had settled, was a household of this type: a young couple, with two children, and the man's parents. The man's brothers, who had been living with him up to two years previously, were now in a smaller house they had built on his plot of land. Next to it were the foundations for another house, where the man's parents hoped to move when enough money could be found to complete it.

We had met the same aversion of the older people to living in their children's houses, in the Marbial Valley and this was even worse than in Kenscoff since our sample there did not include exceptions.

Number of People in the Household

We found the following number of people in the various types of households:

TABLE 2. NUMBER OF PEOPLE IN THE HOUSEHOLD

No. Per Household	Number of Households								
	Type I			Type II			Type III		
	Kenscoff	Neigh. comm.	Furcy	Kenscoff	Neigh. comm.	Furcy	Kenscoff	Neigh. comm.	Furcy
1	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	38	10	7
3	28	10	8	—	—	—	4	1	3
4	43	15	11	3	2	1	5	11	—
5	56	28	23	6	3	—	—		1
6	37	24	25	5	1	1	—		1
7	12	6	36	4	3	5	—		12
8	29	15	39	1	3	2	—		
9	10	7	26	—	1	1	—		
10	5	9	14	3	2	2	1		
11	—	5	1	2	1	1	48		
12	2	2	1	1	—	2			
13	222	1	—	1	—	—			
14		1	1	—	—	2			
15		123	185	1	1	—			
16				27	17	—			
17						1			
24						1			
						19			
Average:	5.6	6.5	7.1	7.3	7.6	10.2	2.4	2.1	2.8

No. Per Household	Number of Households									
	Type IV			Type V			Totals			
	Kenscoff	Neigh. comm.	Furcy	Kenscoff	Neigh. comm.	Furcy	Kenscoff	Neigh. comm.	Furcy	Total
1	—	—	—	54	8	5	54	8	5	67
2	11	—	1	16	2	2	65	12	10	87
3	7	3	2	21	4	3	60	18	16	94
4	8	4	3	12	5	2	71	26	17	114
5	9	8	5	6	1	1	77	40	30	147
6	6	4	3	1	—	2	49	29	32	110
7	3	4	—	5	2	2	24	15	43	82
8	1	23	1	5	—	—	36	18	42	96
9	3		—	1	1	1	14	9	28	51
10	1		1	—	—	1	10	11	18	39
11	49		16	—	—	19	2	6	2	10
12				—	—		3	2	3	8
13				1	1		2	2	—	4
14				122	24		—	1	3	4
15							1	1	—	2
16							468	198	—	—
17									1	1
24									1	1
									251	917
Avge.:	4.5	5.0	5.0	2.7	3.5	4.0	4.5	5.8	6.7	5.4

The average number of people per household for the whole area investigated is between five and six, the same number we had found in 1949 for our sampling of the Marbial Valley on the other side of the Morne La Selle.

Part Played by Husband and Wife in the Household

The husband is expected to be stronger than his wife (and usually is) in order to be able to work harder and to control her and to protect her. He is also expected to make the first advances, before and after marriage or *plasaj*. As a principle, respectable women do not choose their lovers; they wait till they are chosen without being able to indicate any preference, for fear of being accused of boldness. In practice, many women find a way round this difficulty.

The wife takes care of the household and makes all the purchases, since only women are supposed to know all the needs of a house. If the wife is sick, she will ask another woman to do the buying. Her husband may do the cooking and take care of the children if she is away or unable to do so, but as soon as she is back he will go to his fields, or roam about with friends if there is nothing to do in the fields, without doing anything in the house.

We used to go to the house of a daily labourer who worked from 7 a.m. to 3 p.m. He had five small children and a wife who was away from home selling vegetables three days per week. When the wife was in town, the eldest girl (eight years old) looked after the others while the father was working. When he came back he prepared the food for the family but when the wife was in the house, they saw him only at mealtimes.

As a rule the man "keeps his distance" with everybody in the house. He may however talk a little, *bay ti-odyâs* (lit.: give small conversation) when he does not go to his fields, but he should always be the master. The wife should respect her husband; it was explained to us that she is before him "like a child of four before a child of twelve." She must obey him without discussion and never "talk back" to him, because he will tell her to stop and may beat her on that account. If she is going out, the husband may say: "You will not leave the house today!" without giving any reason, only to show his authority, and she will have to stay home. He may also intervene in the choice of her friends and forbid any intimacy with women he will accuse of talking too much and of being trouble-makers.

The man is usually much feared by his children; he whips them when he is there for their small wrong doings. When he asks them anything, they should answer with lowered eyes, even in the *bourg*. In Nouvelle-Tourraine they should use a kind of special "falsetto" voice to indicate their respect. Right up to their establishment in their own house, he may beat and whip them whatever their age.

He may also beat his legal or *plasé* wife with a stick or a peach twig (*ruchin pèch.*). Usually he starts with *u pè suflét* (lit.: a pair of slaps-in-the-face) and *u vire machwa-li* (lit.: turning her jaw bone). The wife does not accept the beating meekly and there is a regular fight. The children, if any, call the neighbours to stop the fighting and to try to conciliate the parties. The neighbours are entitled to intervene without being called when

there are no children or when they are too small to understand.

A man may beat his wife when she "talks back" to him or does not obey his commands, when she is unfaithful, when a meal for which he has given money is not ready on time. He may beat his grown up children for bad conduct or lack of respect.

The wife may start a fight when she is jealous of another woman. Some of these fights are so severe that they end up at the Justice of the Peace Court. Adultery is not approved under any circumstances: a man already provided with a wife – legal or not – should be properly "placed" before living with another. Some women may be tolerant and close their eyes, while others make trouble. When it is the wife who commits adultery, *fè u tivire* (lit.: makes a little turn), the husband will beat her, he may also leave her temporarily. Adultery, however, is not considered sufficient ground for permanent separation.

According to the law, a man should support his legitimate wife and children, but in fact there is not much difference between his legal and extra-legal family. Should the legal wife go to court for failure of her husband to maintain her and her children, public opinion would be against her and it is possible that she would lose her case. Up to now the question is purely academic, since such complaint has never been made in the *bourg* and would be unthinkable elsewhere. Customarily, the woman is responsible for her personal expenses and for the food of her children. She is also expected to provide them with clothes and to pay for their treatment when they are sick. There have always been some fathers who took care of their children, but they constituted and still constitute an exception and are much praised for their generosity.

Up to a few years ago in the *bourg* of Kenscoff it was entirely up to a man to support his children or not, he was not considered a bad father if he did not contribute one cent to their food and clothing. Nowadays, the situation has changed a little; a larger number of children go to school, especially girls, and although they get their schooling free, there are other requirements which did not exist in the past, for example books and other school supplies are no longer distributed free of charge, the material for school uniforms is no longer given free and girls are not now allowed to go to school barefooted and bareheaded. Fathers have been asked to participate in these expenses, and since they have started doing it for their daughters they are also expected to do it for their sons.

It is much the same in all the villages where children go to school: the mother should still feed them and buy their ordinary clothes, give to her husband enough money to purchase drugs and pay for their treatment when they are sick, but the father should contribute something to the payment of books and other school supplies, of school uniforms and other extras in connection with the school.

Husbands are not supposed to give anything for household expenses, but

as a wife explained to us: "They cultivate their fields and give us the produce to sell. They think that we are going to hand them the whole money. We might, if we knew they would give us back something, even on a commission basis, but as we know to the contrary, we keep what we should have to compensate us for the trouble we have taken. He never knows about it. When we sell something coming from our own fields, we don't give him anything although the land belongs to him; it is for the children."

When the wife has no children she will keep the money just the same for household expenses, or save it to buy a plot of land or build a house. Usually, there is no exchange of gifts between husband and wife. However, when there is much love between spouses and if the harvest is good, the husband may present his wife with a dress on New Year's Day or give her a bright new kerchief when she goes to a wedding party. On the other hand, a man is expected to bring gifts from time to time to his mother and to his sisters.

If a woman prefers trade to agriculture, her husband will never give her a sum of money instead of the traditional plot of land; she will have to borrow from friends to get the necessary cash to start. Some women however are cunning enough to devise various tricks, especially in Kenscoff and Guibert, and there are many stories of huts built by the husband on his wife's land which were sold by her before he could do anything, or of husband's fields harvested during the night and the produce sold in bulk by the wife who left the house with her children. Such events, naturally, bring a separation which may be permanent, if the man does not agree to let his wife use the money as she intended and repay him later.

Children, Servants and Permanent Guests

The children of the family are expected to help in the fields, to care for the animals, to fetch water and in general to act as assistants to their mother in all household duties. They should respect all adults in the house, never "talk back" to them or "look at them in the eyes". They should stay at a distance when they see adults in conversation.

While studying the composition of the household we have listed as servants only those who were not related to the family. In reality, there are many varying shades in the treatment of the relatives taken as permanent guests of the family, ranging from the honoured guest to the servant. This difference is not entirely due to economic reasons, as we had already found in the Marbial survey.

It is certain that a well-to-do widow who comes to settle in her daughter's family and not only supports herself financially, but brings an additional income, will enjoy more independence than the destitute sister of the husband taken in with two small children. The latter may be asked to contribute rather heavily to the work in the house and in the fields. If one of her children is older than those of her brother, he may be used as *gadò* (lit.: guardian) of his cousins and never go to school. Nevertheless, the

sister will not be treated like a servant; she will retain her prerogatives of counsellor and, if she is older than the husband and "lives well" with her sister-in-law, she may acquire a great influence in the household.

As a rule, relatives who enter a family as adults, whatever their lack of means, are never treated as servants, while related children often are. It is the mistress of the house who decides at the time of admission what status a child without means or property of his own will have in the family. We have seen in Kenscoff children of *plasé* wives and young step-sisters of the husband considered like servants in the house of their father or of their brother, while in other cases they were on exactly the same footing as the other children, despite their initial poverty.

The wife may accept, or even offer to take a certain child because she needs a servant; she may also take a fancy to a particular child. The child who has started with an inferior status will ordinarily keep it up to the time he leaves the family to get married, "placed", or established elsewhere, usually later in life than the children of the family. In exceptional cases, through his intelligence and accomplishments, he may gradually get back his true place in the household, which explains the various shades in treatment.

Servants are not paid as a rule and generally enter the family as children. In the *bourg*, however, new or foreign residents have started the fashion of paid servants who help them in their shops and take care of the house. Most of these servants are also strangers to the locality and even to the Commune. A few people in Kenscoff bourg also employ low-paid adults as servants, these generally coming from Nouvelle-Tourraine.

Servants are well treated, especially when they are god-children of the master or of the mistress of the house; they are not fed less than the other children when they are small, but they have fewer clothes. If they are adults they have the right to reprimand the children of the house and to whip them in the presence of their parents after having reported an offence done in the latter's absence, but they have no say in matters concerning the family.

Generally speaking, all adults participate in the bringing up of the children and in the smooth running of the household. Some of the permanent guests may be completely self-supporting; nevertheless they would not think of paying, or of offering to pay so much per month for their food and lodging. They usually give a certain amount of coffee, corn and the like at harvest time, a pig or a goat on special occasions, they buy a dress for a child, etc. Poor relatives as a rule buy their own clothing and that of their dependents; they offer their work in exchange of food. Even completely destitute people, when they are not invalids, get their financial status raised after a few months in the household, since they may be entrusted with the minding of animals too (half of the offspring remains theirs), or with vegetables to sell on a commission basis.

We have said that the mistress of the house is the only one responsible for household expenses, especially in the way of food and food utensils. However, when there are no provisions at home, any adult may go into his own field and bring something, or if he has no field, buy from a neighbour, or in a shop, or in the market, the needed foodstuff. Even when there is plenty to eat, it is not forbidden to come back from the market or from town with some "extras", but no regular contribution is expected from anybody.

Children Separated from Their Parents

In our survey we came across many households where some of the children did not live with their parents. Those households fell roughly into three categories:

1) *Those in which the parents had relatively considerable means.* They might choose one or two of their children — sometimes the eldest ones, sometimes the more intelligent, sometimes the youngest in the family — and entrust them to relatives already established in Pétionville or in Port-au-Prince to have them educated there. They pay for the clothing and school expenses of the children, contributing by gifts of food and produce to their maintenance. In one case, the six children of a couple were being brought up in Pétionville (town close to Port-au-Prince) by an aunt of the wife. In another, three families contributed to the maintenance in the capital of a middle-aged relative who kept house for five of their school-age children.

2) *The very poor households* in which the children are too numerous to be decently kept. The parents may send one or two of them to wealthier relatives, or to strangers — usually living in a more advanced community, Kenscoff bourg for Nouvelle-Tourraine or Bongars people, Pétionville or Port-au-Prince for Kenscoff people, for example — in the hope of a better education, in exchange of their working as servants.

We have seen Bongars children quite happy in Kenscoff and were told that it was generally so, while Nouvelle Tourraine children settling in Furcy or Kenscoff would regularly run away. Even when too small to remember the route, they would follow at a distance some acquaintance they saw on the road, or at the market. Most of the time the parents take them back as the children do not make any serious complaint about their foster parents; but these often refuse to try again. When they do take them back, the child, after a few months, sometimes a few weeks, may forget his promises and escape a second time.

Some Kenscoff parents are quite bitter about the treatment their children receive from unrelated foster parents in Port-au-Prince: lack of care, work above their strength and no schooling to make up for these deficiencies. We would like to point out that, deceived by appearances, the parents often entrust their children to people who are as poor as themselves, although they are better dressed and better acquainted with the city ways and city life. These

people are thus utterly unable to maintain the children in the manner their parents expect. They want unpaid servants to slave for them at a minimum cost and complain that "Kenscoff" children (from the *bourg* and neighbouring communities) are lazy, "talk back" and rarely enjoy good health.

In 1957, one of our informants who had a twelve-year old daughter working in Port-au-Prince with a "shopkeeper" took her back because a friend selling vegetables in town told her that the child had been used as the only porter in the moving of this lady's goods from the house she formerly occupied to a house two blocks away. The shopkeeper swore that she herself, helped by a male friend, did all the heavy work and that the child carried only very light things. Nevertheless, two days after she came back to the hills, the little girl became seriously ill and remained so for about a month. The various witch doctors, herb doctors and bone doctors who treated her by way of drugs, prayers, baths and massage, all said that she had some organ displaced while carrying loads too heavy for her age and size. Was it true, or was her inability to walk or even sit down purely nervous? We could not get the mother to consult a regular physician.

A more or less similar story which ended more sadly occurred a few months later. The eleven-year-old daughter of parents living beyond Guibert fell ill in town after some rough treatment from her employer. When the latter saw that the child would probably die, she came to Kenscoff with her in a lorry and brought her to the dispensary for a consultation. As she was far down the line, she asked another patient to look after the child (who seemed exhausted) while she was away for a few minutes. Instead of returning, she went back to Port-au-Prince and the little girl died on the bench before her turn arrived to see either the doctor or the nurse. The child was identified by one of the patients who knew her father and notified him by messenger. This is an extreme case, but stories of mistreatment are numerous. Every year there is a new one, which does not seem to prevent other parents trying their luck and placing their children in town, hoping for the best and having only in mind the few cases where the adjustment had been successful and the child had become a matter of pride to his family and the whole neighbourhood.

3) *The children given to fond relatives to keep them company.* A childless sister, a widowed mother, a lonely father, may get one, or very often two, children, one of each sex, "to play behind their fire."

Relations Between the Households of a Polygamist Family

Twenty years ago, in the *bourg* of Kenscoff, a man could live on his land with his legal wife and his *plasé* wives, each wife having her own house and doing her own cooking, the man eating and sleeping with each one in turn. If one of the wives had to leave her house for one reason or another, she was offered a room in the house of a co-wife. In 1937, we spent three months in such a compound. We had rented the house of one *plasé* wife; one of our friends had rented the house of another; and other city

people had rented the house of the legal wife. All of the "wives" lived for a few weeks in the house of the third *plasé* wife; then the legal wife (former first *plasé* wife) went to the house of her parents with her two children, but the others remained with their *matlót* (co-wife).

Nowadays, such a situation, which is regularly found in almost all the other communities when a man has more than one wife (with the exception that he usually lives with the first one and not in a separate house), is not so frequently met in the *bourg*. In 1957 we saw various cases of two *plasé* wives having their house on the same plot of land, or living "temporarily" in the same house, and cases of legal wife and *plasé* wife living one next to the other (in one extreme case, in the same house with separate cooking arrangements) but although all the wives are still expected "to live well" one with the other, there is in general less familiarity than formerly between them, especially between the legal wife and the others. Moreover, the separation of the wives in space is now the rule and the proximity of their houses the exception.

As we have already said, beside the meagrely furnished house and the little cash she received the day she got "placed", the *plasé* wife is supposed to get a plot of land on which she will work in order to maintain herself and her children. The man does not owe her anything; on the contrary she is expected to feed him every day if he has no other wife to take off some of her load. A married man will live in the same house as his legal wife; an unmarried man who has *plasé* wives will live with the first one and visit the others. In a few cases however, a polygamist may live alone and visit his *plasé* wives in turn.

Even though he may not support his children, a man always wants "to have a claim" on all of them, and in order to get it, he will recognize as his natural children all those he has by his *plasé* wives if he is not married, and will try to do it after he is married. This may be difficult if he is well known. He may have to go to Pétionville, or to Port-au-Prince.

When the father does not recognize his child, or does not ask a brother or a friend to do so for him, the mother's father declares him as his own by a fictitious woman. If he is dead, the mother's grand-father may do the same thing, or when the mother is above thirty and has been "placed" for some time, she may do it herself and the baby will be registered as born of an unknown father. There have been forty-eight such registrations in the *bourg* from 1934 to 1956 inclusive, corresponding to a total of forty mothers. The following details have been obtained about them (some applying to more than one registration):

Mother and father strangers to the *bourg*	9
Child issued from union having lasted less than five years	7
Mother "placed" to father since 1954 (still "placed" in 1957)	1

Mother "placed" to father for length of time varying between five and twenty-four years	23
No other child	10
Child legitimized later by marriage of parents ..	3
Two or three unacknowledged children by same father	2
From one to four other children by same man acknowledged by him or by a substitute father ..	7
Mother married later to another man	1

The legal wife is the only one entitled to be called *Madâ Etel* (Mrs. So-and-So). The *plasé* wife is always called by her first name, this name will be preceded by *Sò* (Sister) or by *Grân* (Grand-mother) when she grows old. Twenty years ago, an unmarried man, whatever his age, was not called *Muche Etel* (Mr. So-and-So); he was called by his first name, sometimes preceded by *Frè* (Brother) when he was over forty. From the day of his wedding, even if he was eighteen, he became *Muche* or *Msye Etel*, for everybody, his mother included.

Nowadays, one may find in Kenscoff *bourg* many married men who are still called by their first name by everybody. Their legal wives, however, are regularly called *Madâ Etel* by them, by relatives on both sides, and by friends in general. This is done to such an extent that children under ten very often do not know their mother's first name. An inquiry among school children from Kenscoff *bourg* and Furcy has revealed that all natural children from five to ten years old, with very few exceptions, knew their mother's first name, while out of 108 legitimate children, 30 did not know it (27.8 per cent).

Plasé wives of the same man call themselves by their first name and the legal wife *Madâ Etel*. Sons and daughters of a man by various mothers call themselves by their first name, sometimes preceded by *Frè* (Brother) or of *Sè* (Sister) when the sibling is much older.

The legitimate wife usually "lives well" with the *plasé* wives who recognize her authority. She may agree that one or two of their children come to live in her house and that the mother comes to help her when they are sick or in case of illness of her husband. In most villages, a *plasé* wife may help her to harvest and to sell the produce of her field, but there are exceptions: in Lachèvre, for example, where they never live on the same plot they do not work together, while in Furcy, Sourcailles, Peno, Corail, Guibert and even Kenscoff, the married wife may not refuse to make use of the services of a *plasé* wife in that connection. The children of the legal wife call the *plasé* wives "*belmé*" (step-mother) and vice-versa.

The same good relations exist or are expected to exist, among the *plasé* wives in all the villages, but there is no question of superiority: it is known that the first wife will become the legal wife, but so long as she is not married she is treated as an equal. To quote only a few instances of friend-

ly relations in the family, in Kenscoff we have seen the daughter of Mrs. Elius G. calling Antoinette A., *plasé* wife of her father, *"bèlmè"*; Marie José N. calling the *plasé* wife of her grand-father, *"bèlmè"*, and the children of Marie A. romping around Flerisia F., *plasé* wife of their grand-father, crying *"matât, matat!"* (aunt); also the legitimate daughters of Aurélien A. in full mourning because of the death of their father's *plasé* wife.

A *plasé* wife may lend some money to her husband which he will use for another co-wife or for her children, with her agreement. Although the legal wife may accept money from that source, she is not expected to reciprocate or to initiate such economic relations.

It is usual for an unmarried man to praise the *plasé* wife who is away before the one who is present to maintain a kind of emulation between them. A man, whether married or unmarried, monogamist or polygamist, will also boast of his love affairs with other women when his wife is around, to make her "appreciate her good luck" to have such a he-man at her beck and call.

THE BREAK-UP OF A HOUSEHOLD

Divorces and Separations: Their Frequency

Eight women and four men have been recorded as divorced in the 1950 Census for the Commune of Kenscoff. According to our information, those of the *bourg* – two women and two men in 1957 – were all "strangers", not only to the *bourg*, but even to the Commune.

Very few married people are separated, the most conspicuous case among the recent ones being that of Estiven R. whose wife took a lover after he left her, "has got placed", say the peasants. She has had two children by him. Among the older cases, that of Frézilus L., who took a wife in Cota, his mother's place, "because girls were not faithful enough in the *bourg*," is often quoted. This gentleman left his wife after five months because he caught her with a lover whom she had had before marriage and had kept throughout. He is still bitter about it, although more than thirty-five years had passed when we last met him in 1957, and although he had had three *plasé* wives to share his "loneliness", and had brought up successfully ten of their thirteen children. As a rule, when married, people do their best to get along together; there may be some disputes, even some fights, but a permanent separation is quite exceptional.

We have gathered the following data on the number of separations among the couples covered by our inquiry:

TABLE 3. NUMBER OF SEPARATIONS

	Legal Marriage			Plasaj								
	Kenscoff	Neighbouring comm.	Furcy	Kenscoff			Neighbouring communities			Furcy		
No. of separations	1	1	1	1	2	more	1	2	more	1	2	more
No. of men in that case	7	1	1	32	4	2	6	2	2	6	1	2
No. of unions not separated	114	95	178		154			40				38
Women					177			45				40

The two legally married men outside Kenscoff who had separated, and three of the Kenscoff men lived without any wives, while the four other Kenscoff men had taken one or more *plasé* wives.

Five of the legally married women who separated from Kenscoff men were not born in Kenscoff. They returned home after the separation; three of them were still living with their parents in 1957. The two Kenscoff women took lovers. Out of the thirty-two separations of "placed" couples in Kenscoff, in which the man separated but once, five occurred among strangers, one between a Kenscoff man and a stranger, and twenty-six between local couples. Eleven women and nine men out of all the Kenscoff separa-

tions of "placed" couples had not replaced their spouse up to the time we left, although most of these separations were more than five years old.

Four men and three women out of the separations of "placed" couples in communities near Kenscoff did not replace their spouses: two women and two men of the Furcy region did not replace theirs.

It should be noted that the 1950 Census registered only thirty-three separated men (legal marriage) and seventy-six separated women (legal marriage) living in the Commune of Kenscoff, with 1,100 married men and 1,111 married women. The greater number of women, both married and separated, may be accounted for by the fact that men from the country seeking work in town usually leave their wives and children at home; also when there is separation the tendency of the woman is to go back to her parents' home, or, when the separation occurs later in life, to stay in the house with the children while the man moves away, sometimes to another community or even to town.

Since 237 widows and 8 divorced women were also registered, it would give a percentage of separations of a little over 5 per cent, if we base our estimate on the figures for women. The number of widowers and of divorced men being respectively 74 and 4, the percentage of separations would not reach 3 per cent (2.7 per cent), if we base our estimate on the figures for men. Our sample gave us 5.7 per cent for Kenscoff *bourg* and 2.3 per cent for all cases combined (figures for men).

The percentage of "placed" unmarried men who separated from their *plasé* wives as indicated in Table 3 was 19.8 per cent in Kenscoff, 20 per cent in its neighbourhood and 19.1 per cent in the region of Furcy.

It should be noted however that this is only one aspect of the question, since there are legally married men — whether they are also "placed" or not — who may have separated from their *plasé* wives, and single men (widowers included) who were formerly "placed" and have separated. We have this additional data about the separation of the *plasé* wives included in our investigation:

	Kenscoff	Neighbouring communities	Furcy region
Separation at marriage of the man	2	2	—
Single men separated before	9	3	—
Married and "placed" men who have separated	10	4	3
Total separated	21	9	3
Total married and "placed" men	38	17	11
Total single men without *plasé* wife	19	7	3
Total *plasé* wives of married men	58	24	13

This gives us a percentage of separations for these categories of people of 26.9 per cent for Kenscoff, 27.3 per cent for the neighbouring communities

and 21.4 per cent for the region of Furcy. If however we lump together all cases we find 21.9 per cent for Kenscoff, 22.9 per cent for the neighbouring communities and 19.7 per cent for Furcy. We had found 29.8 per cent in our sample of the Marbial Valley taken as a whole, but 25 per cent when only the small landowners were considered.

Causes of a Separation and Who Seeks it

The two main grounds for separation between "placed" couples are sterility and tempers that are badly matched. Sterility during five years is followed by separation when the woman wishes it. If she does not, and is exceptionally hard working, the man takes another *plasé* wife to give him children and keeps his sterile wife till death parts them. We know such a woman who has long been the favourite wife of her husband and still lives with him although she is more than sixty years old. In another case, where the *plasé* wife is in her early thirties, her husband, who was already married when he took her twelve years ago, does not show any intention of leaving her.

Tempers that are badly matched make life so hard for both partners that each of them wishes to get rid of the other, and even family and friends become tired of the failure of all attempts at conciliation. The Justice of the Peace himself, after seeing them periodically in Court will advise separation.

Adultery does not automatically lead to a separation, although it may do so if the wronged party is always nagging the other and provoking fights that end up in Court and scandalize the neighbourhood. Regular beatings, wounds inflicted during fights are not considered important enough to break up a *plasaj*

Persistent neglect of household duties and bad bringing up of children are remedied in other ways; for example the man may invite one of his relatives to live in the house, or entrust the care of his children to his mother or sister. A jail sentence for theft or murder is not automatically followed by the separation of the "placed" couple. The *plasé* wife — men are sentenced more often than women — may visit her husband in jail, but she will wait till he has completed his sentence to decide whether or not she may resume life with him. The man who has a *plasé* wife in jail may also take her back after her sentence. To sum it up: separation after a sentence is common, although by no means general.

Another cause of separation is the making of *wâga* (sorcery) by one spouse. when the other is a good Christian.

In all communities visited or on which we could get information, there are more women than men requesting a separation, whether they are legally married or not. The wife may be in the wrong, influenced by bad friends or by a lover, but most of the time she is rightly indignant about some mistreatment on the part of her husband. Usually she goes back to her

parents, taking her children with her. The parents may not approve and may try to conciliate the parties. As a rule the woman will agree to resume common life with her husband if her parents blame her attitude. She will go back with him if he comes to fetch her, or return to his house accompanied by her father or her god-mother.

If her parents do not blame her, she will stay with them and refuse to listen to people sent by her husband in an atempt to take her back.

Economic Factors Involved in a Separation

Economic ties are a great factor of stability in a *plasaj*. In some recent unions where, contrary to custom and because of alleged poverty, the man has not built a house and has given only a leased plot of land to his *plasé* wife to cultivate, we have noticed more fooling around and neglect on the part of the man, as well as a tendency of the woman to go back to her mother under the least pretext; also family pressure to keep the young people together was certainly less strong.

When a man decides to leave his *plasé* wife, he should divide everything he has acquired since he has been with her — plantations, animals, etc. — and give her one-half. However, he will keep the house he has built if it is on a plot of land that belongs to him. If it is on the land of his father-in-law, he will abandon it, because public opinion would judge him severely if he were to dismantle it and take the wreckage elsewhere. The furniture will be divided equally and the woman will take her own half with her in leaving the house. She also carries away with her everything she has brought in, for example pots and pans, table ware, sheets. If she is to keep the house, there will be no dividing of the furniture: she is entitled in that case to the furnished house.

In Kenscoff *bourg* and in the surrounding communities, when the couple have children, the man should sell all the fields his *plasé* wife used to cultivate and give her the money. If the land was bought or put later under her name, there is no need to sell, as she may keep it without further ado. When the couple have no children and it is the man who wants a separation, his *plasé* wife may force him to sell the fields she has cultivated in order to get half of their value. She will also want a room in the house if it is a two-room house, one room and a half if it is a three-room house (one of the rooms would be rented and the rent split in two). If the man has some means, he may prefer to give her compensation in money and keep his house and fields.

In the same regions, when it is the *plasé* wife who seeks a separation, the man may keep not only the house he has built on his plot, but even the fields cultivated by the woman, whether or not there are any children. He may also, if he feels generous, give her a part of one of the fields she has cultivated. They discuss together the allocation of children, but there is a tendency on the part of the man to try to dictate his conditions.

In the region of Furcy, the man keeps his land when there are no children; he will give a part of it (the amount varies with his generosity) to his *plasé* wife if she has borne him at least one child.

The Fate of the Children and of the Permanent Guests

Outside the *bourg* the children are divided between the parents according to sex: the father gets the boys and the mother gets the girls. This is the theory; in practice a great deal depends on the age of the children and the needs of the wife's parents. If the latter are old and have no other grandchildren, they may want to keep at least one child of each sex, most or all of them if their mother was an only child. If the children are big enough to help in the fields, the mother may try to keep one boy — especially if her father is young enough to discipline him — and the father may want a girl to do his cooking.

The allocation of children in the *bourg* and in its immediate vicinity always involves much discussion before the parents come to an agreement. According to some informants (who put the emphasis on the expenses necessary to maintain and educate children), if there are only boys the father will take them all. If there are only girls, they will be divided between the parents, the father taking a larger share than the mother, except in the case of two girls. For example: if there are three girls, two go to the father, one to the mother; if four girls, three go to the father, one to the mother. It was explained to us that the father having more facilities to work should bear the heaviest load and that a woman could not bring up and discipline a boy.

The same principles were said to apply when there were children of both sexes. For example: with two girls and two boys, the father would take the two boys and one girl, the mother would keep one girl.

According to other informants who saw mainly the help children could bring to one or the other parent, children were always divided: when there were only girls, the father had an equal or larger share because they could cook and wash; when there were only boys the mother had an equal or a larger share because boys are better fitted to till the soil. When there were children of both sexes, the mother asked for more boys and the father for more girls.

The permanent guests of a household may be relatives or strangers, or both. Naturally, relatives follow the spouse to which they are related when separation occurs. They may also go to another household. Adopted children are divided according to the same rules as blood children — which means, since rules appear to differ largely, they become the subject of long discussions. Self-supporting adults decide if they should follow the spouse of the same sex "to help with the children" if any, or go elsewhere. Boarded children usually go with the wife, except when she is very young, in that case the parents look for another home for them. The fate of the dependent

strangers is discussed at the same time as the allocation of children. If they are considered a permanent economic liability, the husband should care for them or find another place for them. The servants may be kept by one spouse, or divided, or dismissed, according to the case.

Waiting Period before another Union and Reaction of the Community

It was explained to us in the *bourg* that a separated woman should always wait till the eighth or ninth birthday of the youngest child living with her "before she takes somebody to help her". In practice, however, especially when she is poor, she may not refuse or delay a suitor on account of the youth of her children, but before taking them to a new house she will try to give them temporarily or permanently to her former husband, to her mother, to one of her sisters, or even to their god-mothers.

Some men who have no other wife may take the pretext of needing someone to bring up the children to get married anew or take another *plasé* wife, but as a rule the fathers, helped by their relatives, wait till the last child is eight years old before they bring them to the house of a step-mother, whether they take another wife before that time or not. The mother, on the other hand, never forgets to supply regularly the children who do not live with her with small gifts: a fruit, a five-centime coin and the like, "to make them know her."

In the region of Furcy, the man who has only one *plasé* wife may propose to another woman three months after he has separated from the first one. The separated wife may enter a new union after one year with the consent of her parents, if they are still alive. They may not give it easily. For example, Examène had been living with her mother Rézelle for the six years following her separation when we met her, because the latter thought that nobody was good enough for her daughter who earns a good living as a seller and "does not need a lazy man to put her into trouble again."

A man separated from a *plasé* wife has no more duty towards her after he has given her the share in their common estate attributed by custom. If she becomes destitute, she cannot expect any support from him. When she dies, he will never be asked to participate in the funeral expenses. At least, this is what we have always been told by everybody. Nevertheless, when one of our neighbours died in 1957, there was much talk among those who went to the funeral because her former *plasé* husband, separated from her nine or ten years before, had contributed only two hundred gourdes ($40) in spite of earlier promises. The woman had been ill for two years; she had no children and lived with her mother who was in rather good circumstances.

Since the legally married peasants never take the trouble of getting a legal separation, the *de facto* separated wife is still entitled to support and her husband is responsible for her burial. In practice, however, a separa-

tion is the equivalent of a divorce without the cost. The wife keeps the fields she used to cultivate and the furnished house in which she was living; there is an agreement as to the disposal of children. She does not expect support from him and he probably feels free to contribute or not to her funeral expenses.

A separation, even when the couple is not legally married, never gets the approval of the community and members of the two families involved may cease to be on speaking terms for a few weeks. However, separated people have no difficulty in finding another mate.

Death of the Husband. Inheritance Customs and their Conflict with the Law

According to the law, when a man married without a special contract dies (no peasant is married with any contract and wills are exceedingly rare in the Commune of Kenscoff), the real estate he has inherited, the estate he has acquired before his marriage, and half of his other estate are divided equally among his children – legitimate and natural – the widow getting half of the latter. Illegitimate or unrecognized children, concubines or *plasé* wives have no legal right to any part of his property. When a man dies unmarried, his estate is divided equally among all his natural children. Unrecognized children and *plasé* wives are not heirs.

In practice, however, the children of a *plasé* wife born after the marriage of their father are most of the time recognized as his "natural" children (in another Commune if the father is too well known in Kenscoff) and good relations between legal and *plasé* wives forbid the former to raise any complaint at any time against it. When they are not recognized by their father, he will often compensate for it by the gift of a plot of land, so that they are served before the others, while their father is still alive. Very often they get the field cultivated by their mother, or the house in which she is living with them. In most communities of the region of Furcy, they get house and field at the death of their father without his taking the trouble to put it under their name, while in a few others (Lachèvre, for example) the *plasé* wives inherit and the children get the land when their mother dies.

According to the law, when there are no children and no will, the family of the deceased takes back his inherited real estate and the estate acquired before the marriage, while the other estate is divided equally between the family and the legal wife. If there is none, the family takes everything.

Such is not always the case in practice, especially among the poor and the people of small means. In Kenscoff *bourg* and surrounding communities, if the legal or *plasé* wife has borne alone the expense of the funeral and made a good vault for her husband, she may take all the property he has left without protest on the part of his family. On the contrary, if relatives have taken care of all the expenses connected with the death, they may take everything as compensation, leaving only a small gift to the legal wife

and nothing at all in the case of a *plasé* wife. In the region of Furcy, the childless legal or *plasé* wife always keeps the house built on her land.

The customary heirs in the absence of descendants are the parents; when both are dead, the eldest uncle (paternal or maternal); when there are no uncles, the eldest surviving aunt; when there are none, the eldest brother; then the eldest sister, the eldest nephew, the eldest niece, the eldest male first cousin, the eldest female first cousin. Then the inheritance goes to their children and so on. Grandparents never inherit, whatever their age. We were told in Furcy that when the deceased had no parent, uncle, aunt or sibling left, his god-children could inherit before his nephews, not the eldest one but all of them equally.

The Surviving Members of the Household

The legal or *plasé* wife does not follow her husband's funeral procession to church and to the cemetery. She should not wear mourning either, if she intends to have a new spouse, since it is believed that *y'a prâ nam-lit* (lit.: they will take her soul). If she manifests too much concern at first, there will be revenge on the part of the dead when she wants to use her freedom. If she has no children from that union, she may have to leave the house where she was living and go temporarily to her parents' home or to the house of one of her siblings, and the permanent guests of her household, as we have already said, are in great danger of being scattered.

If all or some of the children of the widow (legal or extra-legal) are still small, she may try to stay with them in the house and to manage everything as if their father was alive, but this presupposes enough money for their upkeep till they have grown up, or the means to earn that money. The fate of the other members of the household, if any, will depend on the contribution they bring. An elderly relative who may keep house and take care of the children while the mother is working will be greatly appreciated; on the contrary a mentally or physically handicapped person may have to move to another shelter.

If all the children of the widow are established, the eldest one may invite her to come to his or her house. If she accepts, the other children should from time to time send her some gifts. She may prefer to live with another child and say so to the eldest, who will relinquish his or her right to keep her. She may also prefer to stay in the house; in that case, if she has no means at all, they may take care of her food and even send her something to eat every day if they do not live too far. If she wants company, she may have one or two children of one of her daughters. If she has already some relatives in the house, they will stay if they are self-supporting and move elsewhere if they are not, except in the case of companions.

Formation of Another Union

The legal wife is free to take another husband after ten months while the *plasé* wife may not wait more than five months.

It was often stated to us that age did not prevent a woman to get "placed". A woman becoming free after she has passed child-bearing age will find *u grâ mun tâku li pu l'fè afè* (lit.: a grown-up person like her for her make affair). She may also take a younger man, even a thirty-five year old man, if she does not look older than he does.

Despite this open door to another union, we have found in our inquiry a relatively large number of widows who – whether by choice or not – had stayed alone, some of them in their forties or early fifties. In the bourg, some very pious widows, *mun ki kêbe legliz* (lit.: people who hold the church) did not want to marry anew or to be "placed" to some man. Public opinion was quite severe about them, accusing them at the same time of refusal to help their family. It was once explained to me that the latter could be expected, as "all these things go together": if one does not conform to custom on one point, there is no reason to believe that one will conform on another.

The following table gives the number of widows and of widowed *plasé* wives in our inquiry who did not enter into another union, although their mate had been dead for more than one year.

TABLE 4. WIDOWS AND WIDOWED PLASE WIVES

	Widows					Widowed Plase Wives					Wives	
	Household Heads			Dependents	Total	Household Heads			Dependents	Total	Legally Married	Actually "Placed"
Age	60+	50-60	less	60+		60+	50-60	less	60+		–	–
Locality:												
Kenscoff	11	7	10	7	35	—	—	5	5	10	114	235
Neighby. comm.	4	—	3	4	11	3	1	—	4	8	95	69
Furcy Region	3	—	5	6	14	—	—	2	—	2	178	53
Total	18	7	18	17	60	3	1	7	9	20	387	357

It should be noted that all "widows" are not legal widows: each year the parish priests celebrate two or three *in-extremis* marriages which are not recognized by Haitian law which requires at least one proclamation of the banns.

The 1950 Census registered 237 widows in the Commune of Kenscoff, a percentage of 16.5 per cent in relation to the total of women actually or formerly married (1,111 married, 237 widowed, 8 divorced, 76 separated) while we found only 15.5 per cent in our sample (387 married, 60 widows, 2 divorced, 9 separated). We should point out in that connection that many of the "widows" of the Census were "placed" at the time but registered as "widows", not only because legally they were still widows, but also because there is more prestige in the latter title.

Death of the Wife: Inheritance Customs

When a woman dies without a will, the law has the same provisions as for a man. The legal husband gets half of the property acquired after mar-

riage, while the children (or the family, when there are no children) get the other half and all of her inherited property. The *plasé* husband is no heir; if there are children of the union, they inherit everything their mother owned, if there are none, the woman's family gets her property.

In practice, the "acquired property" of a woman is usually rather slight. If there are small children, her spouse — legal or not — will administer the property inherited from their mother till they have grown up. If there are only adult children, or no children at all, most of the time he will not get anything from his wife's property which will revert entirely to her children or to her family.

When there are no children, he will take back the fields he had given her to cultivate and the house he had built for her on his plot of land, while the family may claim half the furniture, but as a rule does not when he had always been good to the deceased. The house built on her plot of land should be moved or sold to the family. When there are children, it is customary for the husband in the case of a *plasé* wife to give the house where she has lived to her children immediately after her death. It may be rented all furnished (the furniture should never be moved) and the rent money used to bring up the children, or divided between them if they are adults. If the children cannot care for their mother's cultivations, the father sells them and uses the amount obtained for their education.

The Surviving Members of the Household

When the father has no other *plasé* wife, or when the deceased was the legal wife, he may keep the children with him. He may also give some of them to his mother or to one of his sisters temporarily or permanently for their education. If he has other wives, even if he was living with their mother, he will usually give the children, or some of them, to the parents of his dead wife, or to one of her sisters if they cannot care for them. Both families try their best however not to separate the children. If there are other members in the household, they may have to move, either immediately if the house is rented, or when the man marries again, if he keeps his children with him.

Formation of a New Union

If the widower has means, he will not be in a hurry to find another wife, even if the one who died was the only one and left small children, but he will always be expected to do so one day, as it was explained to us, "there are no widowers over here, only temporary ones". If he is poor, after five or six months he may take a *plasé* wife who will be expected to act as an unpaid nurse to his children, if any, and as a housekeeper to him. If she is not a good substitute mother, he may leave her without compensation, and public opinion will be on his side. The widower may always marry one *plasé* wife after the death of his legal wife; however it is not necessarily

the first one in chronological order as it would be in the case of a first marriage.

In the region of Furcy a widower is expected to wait two years before he takes another wife if he was married and loved his wife. If it was known that their relationship was not very good, he may take one after six months. A man may not replace a *plasé* wife before six months if he loved her, before four months if such was not the case. The wife's mother will take the children, to help him, or his mother if she cannot, or one of the aunts on his wife's side or on his.

An old widower may ask one of his children for a grandson or a granddaughter, or for both to keep him company. His children may also send him his food if he cannot manage himself. As a rule he will not go to live with them, except on short visits.

When the widower marries again, the mother of his dead wife, a sister of the latter, an aunt, or even a cousin, may claim her children. After a new marriage, he may not give them to somebody in his own family, unless there is no one in their mother's family willing to take charge of them. The parents of the dead wife may help their son-in-law in case of need (so long as he has remained a widower), as they may participate in the funeral expenses of their daughter. Usually both families remain on good terms and keep friendly relations after the death of one of the spouses, even when there are no children.

We have found several widowers in our inquiry who were still alone, although their wives had been dead for more than two years (three in Furcy, three in the communities in the neighbourhood of Kenscoff and eight in Kenscoff proper), all of them well over sixty, except one of the Kenscoff men who was in his late fifties. Another Kenscoff man had lost his only *plasé* wife for almost ten years when we left and had not taken another one.

The 1950 Census registered 74 widowers for the whole Commune. It should be pointed out, as in the case of widows, that widowers who take a *plasé* wife will always register as widowers.

Mixed Economic Statecraft and Democratic Safeguards

By

Kenneth K. Kurihara

The less developed economies bent upon rapid growth are understandably tempted to adopt the extreme form of centralized economic planning, especially in these times of hyper-susceptibility to the international "demonstration effect" (the higher consumption and production standards of advanced economies). To resist such a temptation is not to discourage the idea of economic planning but to encourage the *democratic* pattern of growth programming in the *long-run* interest of the developing economies concerned. This essay is broadly intended to be an additional contribution to the literature on the state role in economic development. To be more specific, this essay will discuss the rationale, operational significance, and practical applicability of mixed economic statecraft most closely associated with the name of Keynes, and also suggest the necessary safeguards against the possible abuses of that statecraft in any developing economy that might be inclined to adopt it.

1. Keynesian Mixed Statecraft

The anonymity and impersonality of the modern "mixed economy,"[1] so-called, is in itself a great scientific advance over the emotion-laden labels "capitalism" and "socialism." However, since the concept of a mixed economy represents an ingenious combination of the advantages of capitalism and socialism without their disadvantages, it seems useful to begin with an introductory discussion of the disadvantages of extreme statecraft.

On the one side, there is a policy of *laissez-faire* designed to leave individual economic decisions and activities entirely unchecked even when those activities lead to general instability, insecurity and inequity. Here economic man is assumed to be so rational, economic calculus so precise, economic machinery so efficient, and private property so sacrosanct that inferentially almost nothing and nobody should be subjected to public control. Here is the one extreme case of statecraft where individual liberty is misconstrued as individual license, where political democracy is undermined by economic anarchy, where private virtues are mistaken for the public good, and where private initiative is misinterpreted as a sufficient as well as necessary condition for economic and social progress. The only notable exception to this

[1] As far as I am aware, Professor A. H. Hansen was the first to coin this expression. See his *Fiscal Policy and Business Cycle* (W. W. Norton, N.Y.), 1941.

rule has been the public control of "big business" in the interest of greater atomistic competition. Even today there are a few economists and policy-makers who are interested and concur in the government's function *only* as "the preserver of competition" on the classical assumption that competition is an "all-sufficient" regulator, stabilizer and innovator.

On the other side, there is a policy of authoritarian planning aimed at organizing individual economic units into "classes" for central control at the calculated risks of class wars, partisan strife, personal hatred, and individual injustice. Here central authority is assumed to be so omnipotent, economic man so class-conscious, personal choice so anti-social, and public ownership so indispensable that, by implication, almost everything and everybody should be subjected to public control. Here is the other extreme case of statecraft where economic planning is abused by political totalitarianism, where the national interest is misrepresented by class interests, and where public policy is misinterpreted as the self-sufficing, self-justifying promoter of all economic blessings, social and personal. The only promising exception to this rule is seen in the avowed attempts of some existing authoritarian regimes to "decentralize", presumably in the interests of economic efficiency, individual initiative and consumer choice. Even outside those regimes there are a few economists and policy-makers who contemplate and manipulate the agencies of the state for the authoritarian or autocratic control of economic life on the dogmatic assumption that complete regimentation is the only alternative to complete *laissez-faire*.

It was as offering a better alternative to those extremes types of statecraft that Keynes conceived his *mixed* statecraft, with a specific view to providing technical means to three technical ends, namely: (a) full and stable employment; (b) greater equality in the distribution of wealth and income in so far as it would aid the first aim; and (c) the international homogenization of living standards, especially in the postwar period of reconstruction and development. These are, it is to be stressed, essentially *technical* ends, since their attainment requires rigorous analysis, dispassionate judgment, and clear perception, irrespective of what political attitude or ideological bearing the social scientist may have. Obviously these goals are so great in magnitude and so global in scope that they can be reached only with the aid of the state possessing sufficient resources and the power to use them in the public interest. These technical objects become political issues when they are deemed inconsistent with non-economic goals of society or when they are reached by emotional means. However, apprehensions about the political danger of achieving "full employment at any cost," intimations about the political instability of "an egalitarian society," insinuations about "the road to serfdom," and other misgivings about the consequences of Keynesian statecraft will be found unwarranted when seen in the clear light of Keynes' own democratic premise and technical precaution.[2]

[2]Keynes, while advocating a "system of State Socialism" to exercise "a guiding influence" on private economic decisions and activities, nevertheless was careful to add such qualifications as "the common will, embodied in the policy of the State" and "whilst preserving efficiency and freedom." (See the concluding chapter in the *General Theory*.)

To see the practical usefulness of Keynesian mixed statecraft more readily, it is only necessary to recall the following advantages, as compared with the disadvantages of extreme statecraft indicated above:

First, Keynesian analysis and policy would leave individual economic units perfectly free to pursue their self-interest, thus letting producers maximize their profits, consumers maximize their utility, savers maximize their security or amenity, investors maximize their marginal efficiency of capital, etc. In other words, microeconomic units do not constitute subjects of Keynesian statecraft. Thus the principles of free enterprise, competitive pricing, consumer sovereignty, and private initiative are left intact.

Second, macroeconomic aggregates, such as total saving, total consumption, and total investment, constitute the subjects of Keynesian public control, and they cut across economic classes. As such, these aggregates have the effect of declassing "the working class," "the capitalist class," and other emotion-ridden labels. For instance, the Keynesian concept of "the propensity to save," which is a variable subject to public control, does not admit of blame on any one class when it misbehaves relatively to the given inducement to invest so as to reduce effective demand (in the short run) or to retard economic growth (in the long run).[3] For the propensity to save is an impersonal macroeconomic variable which incorporates the saving propensities of individuals and groups of individuals, regardless of what "class" they may represent from a sociological or ideological point of view. The same holds valid for all other macroeconomic variables which are to be made subject to public control in a Keynesian mixed economy; these variables simply do not lend themselves to the fanning of emotions.

Third, macroeconomic variables subject to Keynesian public control are operationally significant in the sense that they are measurable as definite quantities and quantitative relations, thus making scientific control and prediction possible within technical limits. The technical limits here refer to the dynamic nature of human behaviour, the variability of socio-cultural data impinging on economic man's decisions and activities, and the logical necessity of making the simplifying assumptions of constant behaviour patterns for useful prediction. These limits are, of course, characteristic of all *social* sciences. The main point to be stressed here is that the subjects of Keynesian public control permit quantitative manipulation and plausible prediction, thereby lending themselves readily to scientific analysis and objective policy.

Fourth, and lastly, the variables subject to Keynesian public control are

[3] To be more precise, saving can be said to misbehave in the sense that it falls short of full-employment investment to create an inflationary gap or exceeds full-employment investment to create a deflationary gap — according to the familiar short-run income mechanism of the form $\triangle Y = f\ (I - S)$, where $\triangle Y$ is an increment (or a decrement) of effective demand, I investment, and S savings. In the long run, on the other hand, it is as causing an inflationary or deflationary divergence from the equilibrium rate of growth that saving can be said to misbehave — when that equilibrium rate is given by $\triangle Y'/Y' = s/b$, where Y' is productive capacity, s the average propensity to save out of full-employment real income, and b the average and marginal capital-output ratio. (For detail see my *The Keynesian Theory of Economic Development*, London, 1959.)

related to national income and wealth in such a way as to allow *indirect* monetary and fiscal control mechanisms to operate effectively, thus rendering direct controls (e.g., rationing, priority allocations, price fixing, and import quotas) largely superfluous. For monetary and fiscal policies are capable of influencing the behaviour of saving, consumption, investment, and other macroeconomic variables through their influence on national income and wealth. Moreover, the effective use of monetary and fiscal policies would make the doctrinaire espousal of public ownership irrelevant. This does not, however, imply that Keynesian statecraft dogmatically excludes direct controls or public ownership under all circumstances, for surely experience warrants the complementary use of direct controls and supplementary resort to public ownership under some circumstances (e.g., wartime, underdeveloped economies without much private initiative and capital,[4] trading nations with persistent balance-of-payments difficulties, and advanced economies with strong democratic safeguards).

2. Democratic Safeguards Against Abuses

The democratic principle was so much of a second nature to Keynes[5] that he apparently considered it redundant to specify democratic safeguards against the possible abuses of central authority in the economic field. None the less, his digressive remarks here and there are helpful in enumerating the kinds of safeguards which a mixed economy ought to evolve, as follows:

1. The central controls necessary to guide the smooth functioning of a mixed economy should be coupled with a public policy of encouraging "the decentralisation of decisions and of individual responsibility."[6] Such a policy implies a due diversification of central authority at the national, provincial and local levels, collaboration between the public and private sectors, and the co-functioning of the price mechanism and the public-control mechanisms. To the extent that these implications are brought out as a matter of deliberate policy, to that extent will democratic values (e.g., the exercise of personal choice, the variety of life, the love of the common man, and the independence of mind) be helped rather than hindered. To that extent, conversely, totalitarian homogeneity and authoritarian inelasticity will be averted.

2. The necessary central controls should be supplemented by a public policy of fostering the natural evolution of public-spirited, public-relations-conscious, semi-autonomous private enterprises and institutions (e.g., public utilities, banks, schools and churches) as well as of constructing built-in stabilizers and equalizers (e.g., social security programmes, progressive taxation, collective-bargaining legislation, fair-employment-practice legislation, and public housing and schooling). Such a policy would help safeguard a

[4]Cf. R. J. Alexander, "State vs. Private Enterprise in Latin America," *American Journal of Economics and Sociology*, January 1958.

[5]See R. F. Harrod, *The Life of John Maynard Keynes* (N.Y., 1951).

[6]*General Theory*, p. 380.

mixed "welfare state" against the abuses of collectivism inasmuch as the need for complete planning and the clamour of sentimental egalitarianism would thereby be mitigated.

3. The necessary central controls should be implemented by the creation and protection of autonomous monetary and fiscal agencies free from partisan political considerations and private lobbies, that is, government agencies armed with permanent control powers as well as with flexible control mechanisms — subject to the ultimate Parliamentary constraint. Here the traditional principle of monetary sovereignty protecting the independence of central bank policy-making must be extended to a fiscal authority entrusted with the task of applying fiscal measures in the interests of economic stability and growth.

4. The state should encourage "the collection and dissemination on a great scale of data relating to the business situation, including the full publicity, by law if necessary, of all business facts which it is useful to know."[7] Such a policy of promoting mass enlightment on economic affairs would make for more effective democratic voting[8] and policy-making, while at the same time making against demagogic pleading. Mass education is therefore a powerful long-run safeguard against theoretically unsound policy-making in the economic field as well as in other fields.

5. The state should be willing to "entrust to science the direction of those matters which are properly the concern of science."[9] Applied to economic policy-making, this would mean that the economic problems of national and international importance should be discussed, analyzed and approached for their solution in the spirit of "Bretton Woods" (monetary conferences of international experts at Bretton Woods, N.H., U.S.A.). Apropos, Sir Roy Harrod tells us that "Keynes tended till the end to think of the really important decisions being reached by a small group of intelligent people, like the group that fashioned the Bretton Woods plan."[10] He then raises the pertinent question: "But would not a democratic government having a wide multiplicity of duties tend to get out of control and act in a way of which the intelligent would not approve?"[11] Neither Keynes nor Harrod answers this question, however. One might answer that the possible danger of a democratic government resorting to undemocratic solutions to economic problems is likely to be lessened by its executive branch working closely with its legislative and judiciary branches, as a truly democratic government should,

[7]Keynes, *Essays in Persuasion* (London, 1952), p. 318.

[8]An enlightened voting public is presupposed by C. A. R. Crosland when he asserts: "Any Government which tampered seriously with the basic structure of the full-employment Welfare State would meet with a sharp reverse at the polls; and this knowledge acts as rather a strong inducement to politicians not to tamper." (See his *The Future of Socialism*, London, 1956, p. 61.)

[9]Keynes, *Persuasion*, p. 373.

[10]See his *The Life of John Maynard Keynes*, p. 193.

[11]*Ibid.*

as well as by its policy-makers having the benefit of the vision and precaution of technical advisers in and out of the government service.[12]

[12]It is fitting, in this regard, to cite Keynes' own defence of experts: "I dare to speak for the much abused so-called experts. I even venture sometimes to prefer them, without intending any disrespect, to politicians. The common love of truth, bred of a scientific habit of mind, is the closest of bonds between the representatives of divers nations." (Speech on the International Monetary Fund before the House of Lords, May 23, 1944).

BOOK REVIEWS

Population Trends in Eastern Europe, the U.S.S.R. and Mainland China. Proceedings of the Thirty-Sixth Annual Conference of the Milbank Memorial Fund, New York, 1960.

This collection of essays on the demography of the Communist-controlled countries of the world demonstrates clearly the importance placed by America on the populations of areas with which, conceivably, she may be militarily involved at some time in the future. Together these countries support about one billion people, and these elegant attempts to wrest from the fragmentary data available a picture of the human resources of the Communist world graphically illustrate the care with which the various agencies of the United States are studying the potential strength of these countries. Of note is the fact that four of the nine papers are by demographers of the Foreign Manpower Research Office, and that three of these authors write on Russia.

The most important thread running through all papers is a lack of adequate demographic data. This is most marked in the case of the two giants of the region, China and the Soviet Union. Both of these have had recent censuses. But the 1953 census of China has so far yielded results which evidently satisfy no Western demographer, while to date very little has been forthcoming from the 1959 Soviet census. Professor Eckstein in one of the papers doubts whether Communist China has deliberately set out to mislead the outside world by material so far released on the 1953 census. He argues that much of the discrepancy in the published data stems from the inefficiency of the data provided during the period between the collapse of the Manchu dynasty and the assumption of power by the Communists. He does not however deny that China consistently relies on "statistical camouflage". In the case of the Soviet material it seems that deliberate efforts have been made to withhold demographic data from the Western world, presumably on the ground that it would reveal weaknesses in the economy of the country. The U.S.S.R. is doubtless fully cognisant of the inferences American demographers and economists can draw from relevant census data on labour shortage and military potential, and has clearly done little to aid Western demographers in their attempts to estimate the total loss of life experienced in the two World Wars and in the intervening period.

The papers, presented at a Round Table organized by the Milbank Memorial Fund, are grouped into three series. In the first of these, three papers survey the demographic problems of Eastern Europe. The second consists of three papers on Mainland China, while papers dealing with factors relating to population growth form the subject of the third series.

In the first paper on the series covering Eastern Europe Dr. J. W. Combs, Jr., surveys the demographic changes in this region. He concludes that

between 1938 and 1947 these countries experienced massive losses – totalling 8 million – despite the fact that this period witnessed 20 million births. The recent indications are of declines in both mortality and fertility, with only moderate rates of growth. The second paper of this series – Dr. J. F. Kantner's analysis of recent demographic trends in the U.S.S.R. – is handicapped by the absence of comprehensive data from the 1959 census. Infant mortality rates show a decline which most Western demographers dispute, while there is a marked fall in birth rates in recent years. In an important paper, Professor Warren W. Eason examines the utilization of human resources in Russia. He shows that in general the Soviet Government aims at inducing maximum participation in the labour force. A large group of intermittent workers, together with contributions of families on collective farms, creates difficulties in arriving at firm estimates of the labour force. Evidently in many cases Soviet procedure is to include in the labour force persons who, under Western approaches, would be considered as in households or subsidiary economic activity. In Eason's words, "the Soviet economy is still one based on the broad mass of manual and semi-skilled labour – on the 'proletariat', in a basic sense of the word". This accounts for the redirection of education to ensure greater supply of workers for the production line jobs. It also may reduce the numbers coming up for advanced training. The author then deals with recent trends which allow some freedom of labour to move from one job to another, but doubts whether this has resulted in any marked rise in labour turnover. In the discussion that follows Dr. Lorimer raises the question whether the labour force approach can justly be applied to Soviet society.

The second series of papers, dealing with Mainland China, opens with a paper by Dr. J. S. Aird, who subjects the published data of the 1953 census to very close analysis. He considers the conditions under which the enumeration was organized and the factors making for accuracy as well as those tending to introduce defects. It is suggested that some factors definitely affect the accuracy of the data, the determination of permanent residence and household composition, but probably do not impair completeness of enumeration. Age distributions appear to be especially defective, the shortage of persons in the 5 to 14 age range, a frequent phenomenon in Chinese population statistics, is put down to "traditional biases in the reports given by heads of households". In the discussion that follows Aird's paper, Dr. John Durand raises the question whether the overall birth rate of 45 used throughout is justified; work in progress at the United Nations suggests that many parts of China show rates much lower than this. In the second paper of this series Mr. Leo Orleans analyses internal migration and population distribution in China, paying attention to the effects of Government policies aimed at influencing migration as well as to those passed expressly for industrial and agricultural development in various areas. In the following paper Professor Alexander Eckstein sets out interesting com-

parisons between Chinese and Russian sources of data before he develops measures of industrial progress in China. He concludes that industrial progress under the First Five Year Plan exceeded comparable developments experienced by Russia, a conclusion with which discussants seemed in broad agreement. Of interest is his finding that productivity of labour in China is higher than at comparable stages of development in Russia.

In the first paper of the third series Mr. W. Parker Mauldin deals with fertility control in Communist countries. He argues that the official Russian line on abortion — which was first permitted then legislated against — is related to an awareness of the growing shortage of population between 1926 and 1936. The steep declines in birth rate in this period seem indeed directly to determine the pro-natalist policy introduced in 1936. Despite the various attempts to stimulate fertility the downward trend in the birth rate has continued, the fall between 1926 and 1958 being from 43 to 25. In the other major Communist country, China, it would seem that, despite the pride in numbers created by early releases on the 1953 census, the regime sought at the outset to establish the basis for fertility control, although this was at variance with orthodox Marxism. The reasons behind the subsequent reversal of this policy are not apparent. In a paper which draws heavily on Russian sources, Dr. D. B. Shimkin examines many aspects of population growth and economic change. The varying role played by Western Russia as a source of people for the development of other areas, the influx into the towns associated with industrial expansion, the effects of internal passports and labour conscription, are in turn considered. The author also touches on certain aspects of fertility in the U.S.S.R. In the final paper Dr. Irene Taeuber and Mr. Nai-chi Wang subject available demographic data for China to very close scrutiny and make some comparisons among the major sources.

Although these papers are presented as formal demographic studies, they illustrate the extent to which available data can be used as bases for economic and, possibly, military intelligence. There is no evidence that the results of such studies are in any way governed by security controls, but in the nature of things there may be many analyses of Communist countries which would not be made public. In view of the known significance to America of results of the 1959 Russian census, one wonders whether such information will be made available to Western demographers. As many of the authors of this volume emphasize, migratory movements in Communist countries frequently result from Government directives, and the publication of detailed demographic data may well show the Western world facets of Communist policy which otherwise would remain unknown. Consequently the extent to which the Soviet Government makes 1959 census and other data available will be awaited with interest.

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of the West Indies.

The Drum and the Hoe: Life and Lore of the Haitian People. By Harold Courlander. University of California Press, 1960. $10.00.

Courlander's book is an account of the folk culture of the Haitian peasants, and especially of their magico-religious practices, music, games and arts. It summarizes materials gathered over twenty years, some of which have been published before.

The book is a beautiful example of high quality production, with 90 photographs, and the music and words of 186 Haitian songs. Appendices are devoted to the Vodun pantheons, Haitian peasants games, proverbs, orthography, and translations of the songs. There is a glossary of Creole terms, a bibliography and list of recorded Haitian music. It is quite an achievement on the part of the author that his text sustains this elaborate treatment. The book is a delight to handle. It can be read for pleasure and information by general readers as well as specialists.

What Dr. Courlander set out to do was to give a non-technical description of the aesthetic and religious background of Haitian peasant life. He has done so admirably. By an oblique method of accumulating data, he shows the richness and essential dignity of this exotic peasant culture. The circumstances of Haitian history and economy have set limits to the peasant's world. By retaining and developing their traditions which stem from Africa, the peasants have produced a satisfying culture in which aesthetic richness counterbalances material poverty. There are signs that this balance is now beginning to change: but Dr. Courlander is not concerned with the wider problems of Haitian society; his attention is focused on the peasant religion and arts.

As such this book does not claim more than to present an account of the aesthetic and magico-religious aspects of Haitian peasant life. The materials are well organized, the exposition is lucid and illuminating and Dr. Courlander has an excellent prose style. While the presentation is explicitly non-controversial, his data clearly support Professor Herskovits' analysis of Afro-American cultures and of Haitian peasant culture in particular.

After an introductory chapter sketching the outline of Haitian history, Courlander gives a systematic outline of Vodun beliefs and ritual. This is perhaps the most important ethnographic section of the book. Although there have been many previous studies of Haitian Vodun, I know of none quite as clear and economical. Obviously, Courlander's problem was to distil and control his wide experience of this ritual. The acuteness of his observations may be illustrated by his distinction between possession and obsession of Vodun dancers. An Appendix classifies the host of Haitian spirits in their major pantheons, and substantiates Courlander's point that the identities of various spirits may fuse or overlap. It is quite clear that, to the Haitian peasant who follows one pantheon, this is only meaningful in terms of the total assemblage of spirits.

Another distinction of this study is that it points up the numerous linkages between the secular and religious ceremonies, songs and festivals of the Haitian peasant. From one point of view, Vodun is simply the explicitly religious segment of an aesthetic range which also has important secular elements and functions. Of these secular elements, those best documented here are the songs of complaint and ridicule, adulation, and the dance; a large section of the book is devoted to these. Carving, metal work, drummaking and other peasant crafts are also described and illustrated.

This is an excellent introductory account of Haitian peasant culture, especially in its religious and aesthetic elements.

M. G. Smith.

Windward Children: A Study in Human Ecology of the three Dutch Windward Islands in the Caribbean. By John Y. Keur and Dorothy L. Keur, Published in co-operation with the Prins Bernhard Fund Netherlands Antilles by Royal Vangorcum Ltd., Assen 1960.

In 1956-7 the Keurs made a detailed comparative study of the three Dutch islands of St. Maarten, Saba and St. Eustatius. John Keur who is an ecologist concentrated on their ecology. Dorothy Keur investigated their sociology, and both seem to have studied the history of these islands. A husband and wife team, they were able to combine their information and skills with great success, thus producing an account in which sociological and ecological viewpoints and data are closely integrated with one another and with the historical record.

Saba is a volcanic cone about two and a half miles in diameter, rising to a maximum of 2,800 feet. St. Maarten island is about 33 square miles, most of which is French, while the Dutch retain the smaller southern portion. St. Eustatius is about 8 square miles. The three islands are within sight of one another, scattered among the British Leewards. However, they are distinguished by the Dutch from Aruba, Bonaire and Curacao, on which they depend economically, as Windward Islands. It is typical of Caribbean affairs that the British Leewards and the Dutch Windwards are mixed up together.

In 1957 St. Eustatius and Saba had about 1,000 people each, and St. Maarten nearly 1,600, of whom about 200 were whites, as against half the population of Saba and about 2 per cent of St. Eustatius where the rest are of Negro descent.

Until 1781 St. Eustatius was probably the biggest and richest smuggling centre in the New World, with a population of over 25,000 people, slaves being among the most important items smuggled. Then the British destroyed it. St. Maarten remained primarily agricultural until the Dutch abolition of slavery in 1860, while the economy of Saba has always been based on sea-

faring and emigration. Even in the eighteenth century there were few slaves in Saba. While St. Eustatius traded in slaves it had few plantations; in St. Maarten most slaves were used in agriculture.

Ecological conditions are such that agriculture in these islands is a risky business; rainfall varies, pests flourish, there is little suitable land and communications are poor. In addition, the markets for local crops are uncertain. The Keurs recite an impressive history of economic failures in enterprises of one sort and another in these communities. They show that following on emancipation in 1861 the island economies gradually switched from productive agriculture to dependence on outside subsidies, primarily from Government but also from emigrant natives. Agriculture is now disvalued, wages are high, labour scarce, and prices of local products are non-economic. Land is held jointly by kin who lack legal titles and often leave their holdings unworked to avoid litigation. Class and colour lines are sharp, and seem to be made even sharper by the exclusiveness of the Dutch-born white officials who occupy the positions of highest prestige. Distinctions between Dutch-born whites, native-born upper-class whites, native-born poor whites, the coloured upper-class, the coloured middle-class and the coloured lower-class are important but not exhaustive. Where present, Surinamers may form a separate category. To multiply confusion, although the islands are Dutch, English is the dominant language and is used in a dialect form. Dutch and French are taught in school, apparently to little purpose.

In 1951 under a new Constitution, the islands were linked with Aruba, Bonaire and Curacao to form the Dutch Antilles, and adult suffrage was introduced. Local autonomy is provided for through a Council of locally elected politicians who advise the Administrator. The Keurs show quite clearly how this democratic machinery merely provides means for the expression of local tensions and interests, rather than for the solution of local problems. But perhaps the islanders are not too much to blame for this. Since emancipation they have been administered paternalistically by the Dutch, and they have no tradition of political participation. This cannot be developed overnight, as maybe convenient.

In summarizing these data on the Dutch Windwards, I have tried to indicate the scope of the Keurs' study. By comparing Saba, St. Maarten and St. Eustatius in each particular, the writers show how history has promoted differing adjustments in some particulars and common attitudes in others. In short, an adequate analysis of these units requires an approach which is simultaneously comparative, ecological, historical and sociological.

The text is clearly written and packed with detail, giving a rounded description of life in the Dutch Windwards. Unfortunately it has no index and unnumbered chapters. A more serious criticism is its treatment of the local Dutch administration. The Keurs seem to blame the islanders for their divisive society, their apathy and low levels of performance; but their own historical data seem to indicate that the Dutch are at least

equally responsible for these effects. The societies were set up as colonial enterprises, and retained that status until they were no longer profitable. The racial compositions of the three units gives evidence of this.

Perhaps the book's chief merit is its holistic comparative treatment. For this purpose, the combination of ecological, historical and sociological skills is of special value; and so was the choice of research field. With such minuscule units and populations, this type of treatment is manageable and and effective. The Keurs may not have solved many problems of Caribbean sociology, although they show how misleading it is to "explain" these societies in terms of the plantation. They have certainly restated many important problems concerning relationships between ecology, history, population size, and social structure. They have also set high standards of field work and reporting for Caribbean ethnographers.

M. G. Smith.

Proceedings of the International Conference of Agricultural Economists: Tenth Conference, 1958, London, Oxford University Press, 1960

The Tenth International Conference of Agricultural Economists was held in India; this was the first time that such a Conference has been held in Asia. About three hundred members from fifty-six countries attended the meetings which were devoted to the theme "Agriculture and its terms of trade: A consideration of the problems of balance between agriculture and other activities in the process of the economic growth of states and the development of a sound world economy". The twenty-three papers read focussed on two main topics: an examination of "...some of the more important of the factors which determine the changes which are forever occurring in agriculture's terms of trade" and the "...scope for national and international action...to deal with the actual or impending shifts in the fortunes of agriculture". The titles of the papers included: *The Shifting Fortunes of Agriculture (The General Setting, The Experience of the More Highly Developed Countries, The Experience of Less Fully Developed Countries); Technical Peculiarities of Agricultural Supply; Changes in the Demand for Farm Products; Changes in Composition of Farm Inputs and Farm Outputs; The Disparate Stability of Farm and Non-Farm Prices; Lack of Institutional Flexibility in Agriculture; Education, Research, and Extension; Using Economic Research in Policy Making; Marketing, Communications and Transport; Agricultural Support Measures; Finance for Development; Population Movements; Interdependent Development of Agriculture and Other Industries; International Organisations; Planning Procedures; International Co-operation in Agricultural Economics.*

The titles of the papers and the numerous countries from which the economists were drawn bear witness to the variety of interests catered for at

the Conference. The volume of the Proceedings will repay reading by anyone interested in the economics of agriculture in the newly developing or in the advanced countries.

D. T. E.

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